OUR HOBBY

STOWE SUPPLY COMPANY

KANSAS CITY, MO.

WHOLESALE HARDWARE,
AGRICULTURAL SUPPLIES
and AUTOMOTIVE ACCESSORIES

GENERAL CATALOG Nº 30

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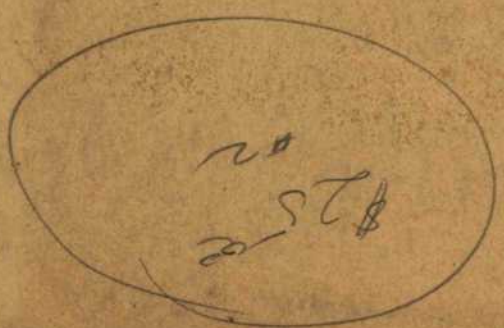

GENERAL CATALOG No. N

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KANSAS CITY, MISSOURI

HARDWARE AGRICULTURAL SUPPLIES

AUTOMOTIVE ACCESSORIES

WHOLESALE ONLY

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360

GENERAL CATALOG No. 30

Supersedes and Cancels All Previous Issues of Our General Catalog

STOWE SUPPLY CO.

Edw. O. Faeth, President

KANSAS CITY, MISSOURI

Station "A" Post Office

1322-30 West 13th St.
Central Industrial District

Local and Long Distance
Phone Main 3390

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PRIVATE TELEPHONES IN ALL DEPARTMENTS

■

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PASSENGER AND FREIGHT ELEVATORS

■

LARGE DOCKS FOR SHIPPING AND RECEIVING

■

TWO RAILROAD SWITCHES

■

ONE BLOCK TO POST OFFICE WITH DIRECT TRAIN SERVICE

SEND US YOUR MAIL ORDERS

Special Catalogs

We can furnish on request Special Catalogs with more detail description on Silverware, Stoves, Furnaces, Engines, Garden Tools, Galvanized Products, Barn Equipment, Stalls, Stanchions, Litter Carriers, Hay Tools, Barn Door Hangers, Ignition Parts, and Automotive Accessories.

Prices and Terms

It is our policy on open orders to give our customers the benefit of ruling prices on date of shipment. It must be understood, however, that all prices are subject to immediate change without notice. Usual terms and cash discounts to dealers with satisfactory credit responsibility.

Routing Shipments

Where no routing is given on the order, we ship the best way, considering cost, time of delivery, etc., it depending altogether on the articles specified.

Parcel Post Service and Rates

Our main warehouse is located one block from Station "A" Post Office, which now operates motor trucks direct to the trains on all of our outgoing mail. This means prompt handling of parcel post packages.

Parcels weighing four ounces or less are mailable at the rate of one cent for each ounce or fraction of an ounce, regardless of distance. Parcels weighing more than four ounces are mailable at the pound rate shown in the following table, a fraction of a pound being considered a full pound.

Weight, lbs.	ZONES Local	First	Second	Third	Fourth	Fifth
1	.05	.05	.05	.06	.07	.08
2	.06	.06	.06	.08	.11	.14
3	.06	.07	.07	.10	.15	.20
4	.07	.08	.08	.12	.19	.26
5	.07	.09	.09	.14	.23	.32
6	.08	.10	.10	.16	.27	.38
7	.08	.11	.11	.18	.31	.44
8	.09	.12	.12	.20	.35	.50
9	.09	.13	.13	.22	.39	.56
10	.10	.14	.14	.24	.43	.62
11	.10	.15	.15	.26	.47	.68
12	.11	.16	.16	.28	.51	.74
13	.11	.17	.17	.30	.55	.80
14	.12	.18	.18	.32	.59	.86
15	.12	.19	.19	.34	.63	.92
16	.13	.20	.20	.36	.67	.98
17	.13	.21	.21	.38	.71	1.04
18	.14	.22	.22	.40	.75	1.10
19	.14	.23	.23	.42	.79	1.16
20	.15	.24	.24	.44	.83	1.22
21	.15	.25	.25	.46	.87	1.28
22	.16	.26	.26	.48	.91	1.34
23	.16	.27	.27	.50	.95	1.40
24	.17	.28	.28	.52	.99	1.46
25	.17	.29	.29	.54	1.03	1.52
26	.18	.30	.30	.56	1.07	1.58
27	.18	.31	.31	.58	1.11	1.64
28	.19	.32	.32	.60	1.15	1.70
29	.19	.33	.33	.62	1.19	1.76
30	.20	.34	.34	.64	1.23	1.82
31	.20	.35	.35	.66	1.27	1.88
32	.21	.36	.36	.68	1.31	1.94
33	.21	.37	.37	.70	1.35	2.00
34	.22	.38	.38	.72	1.39	2.06
35	.22	.39	.39	.74	1.43	2.12
36	.23	.40	.40	.76	1.47	2.18
37	.23	.41	.41	.78	1.51	2.24
38	.24	.42	.42	.80	1.55	2.30
39	.24	.43	.43	.82	1.59	2.36
40	.25	.44	.44	.84	1.63	2.42
41	.25	.45	.45	.86	1.67	2.48
42	.26	.46	.46	.88	1.71	2.54
43	.26	.47	.47	.90	1.75	2.60
44	.27	.48	.48	.92	1.79	2.66
45	.27	.49	.49	.94	1.83	2.72
46	.28	.50	.50	.96	1.87	2.78
47	.28	.51	.51	.98	1.91	2.84
48	.29	.52	.52	1.00	1.95	2.90
49	.29	.53	.53	1.02	1.99	2.96
50	.30	.54	.54	1.04	2.03	3.02
51	.30	.55	.55	1.06		
52	.31	.56	.56	1.08		
53	.31	.57	.57	1.10		
54	.32	.58	.58	1.12		
55	32	.59	.59	1.14		
56	.33	.60	.60	1.16		
57	.33	.61	.61	1.18		
58	.34	.62	.62	1.20		
59	.34	.63	.63	1.22		
60	.35	.64	.64	1.24		
61	.35	.65	.65	1.26		
62	.36	.66	.66	1.28		
63	.36	.67	.67	1.30		
64	.37	.68	.68	1.32		
65	.37	.69	.69	1.34		
66	.38	.70	.70	1.36		
67	.38	.71	.71	1.38		
68	.39	.72	.72	1.40		
69	.39	.73	.73	1.42		
70	.40	.74	.74	1.44		

Sharp Instruments, Etc.

When sharp-pointed instruments are offered for mailing, the points must be capped or encased, so that they cannot cut through their covering.

Blades must be bound so that they will remain firmly attached to each other or within their handles or sockets.

Fragile Packages.

Any package containing glassware, grey iron castings or any article which might break easily should be marked "Fragile" to assure more careful handling.

Guaranteed Deliveries.

We guarantee the delivery of all packages sent by parcel post, for which a small charge will be added to the price in addition to the postage charge.

If guaranteed delivery is not wanted, then so state in each order.

Size and How Measured.

The law prescribes that a package to be admitted to the parcel post shall not exceed eighty-four inches in combined length and girth. In measuring the length the greatest distance in a straight line between the two ends of the parcel shall be taken, while the girth is the actual measurement by a tape encircling the parcel at its thickest part.

Limit of Size and Weight.

If a parcel exceeds fifty pounds in weight, except parcels for delivery within the first, second and third zones, where the limit of weight is seventy pounds, or is greater in size than eighty-four inches in length and girth combined, it must be refused, no matter how small the excess may be in either case.

This Catalog compiled by C. D. Jellings and W. J. Edsall. Printed by Smith-Grieves Co. June, 1924.

TELEGRAPH CODE

On such items as experience has proven there may be a telegraphic demand we have established a code as given below. This means a saving to our customers in telegraph charges, and also insures better handling of their orders because of being more definite. In addition to establishing a code word on the items we also code a few of the more generally used phrases or sentences. Some items listed in code below are not carried in stock but shipped from factory. Be sure to refer to catalog page before ordering, as there will be a slight delay on factory shipment items.

PHRASES AND SENTENCES.

Code	Sentence.
Sage	Can you make immediate shipment?
Sago	Have shipped to us from factory.
Sail	Referring to our letter.
Sake	Referring to your letter.
Sal	Referring to our telegram.
Salad	Referring to your telegram.
Salam	Ship quickest way.
Sally	Ship by express.
Salvo	Ship by parcel post.
Samp	Ship by freight.
Sane	Ship what you can at once and let balance follow as soon as possible.
Sank	We are writing you fully today.
Sap	When can you ship?
Sard	Wire an answer immediately.
Sate	Wire an answer at our expense.
Surf	Wire prices on

CATALOG REFERENCES.

Page 485

Code	
Scaly	Fowler Cultivator.
Scamp	Fowler Trench Tool.
Scamper	Fowler Gauge Wheel.

Page 492

Code	
Tapis	No. 6 Myers Sprayer.
Tardy	No. 7 Myers Sprayer.

Page 494

Code	
Scan	No. R316B Myers Sprayer.
Scape	No. R316C Myers Sprayer.
Scar	No. R309 Myers Sprayer.
Scare	No. R309A Myers Sprayer.
Scarf	No. R309B Myers Sprayer.
Scarp	No. R309C Myers Sprayer.
Scath	No. 15 Myers Sprayer.

Page 525-526

Code	
Scrip	No. 1000 Discharge Hose.
Scull	½ in. No. 200 Steam Hose.
Scum	¾ in. No. 200 Steam Hose.
Scurf	1 in. No. 200 Steam Hose.
Scut	1¼ in. No. 200 Steam Hose.
Sear	¾ in. No. 400 Suct. Hose.
Sect	1 in. No. 400 Suct. Hose.
Sedge	1¼ in. No. 400 Suct. Hose.
Seine	1½ in. No. 400 Suct. Hose.
Senna	1 in. No. 100 Suct. Hose.
Sense	1½ in. No. Gleaner Suct. Hose.
Sepal	2 in. No. Gleaner Suct. Hose.
Sepoy	2 in. No. 800 Suct. Hose.

Page 526

Code	
Seton	No. R479 Tank Pump.
Setto	No. 1 Tank Pump Outfit.
Sever	No. 2 Tank Pump Outfit.
Shad	No. 3 Tank Pump Outfit.
Shag	No. 4 Tank Pump Outfit.

Page 527
Canvas Stitched Endless Belts.

Code	Size	Length
Shave	6 in. 4 ply	50 ft.
Shawl	6 in. 4 ply	75 ft.
Sheen	6 in. 4 ply	100 ft.
Shire	6 in. 4 ply	125 ft.
Shirk	7 in. 4 ply	50 ft.
Shirr	7 in. 4 ply	75 ft.
Shoal	7 in. 4 ply	100 ft.
Shock	7 in. 4 ply	125 ft.

Page 527
Canvas Stitched Endless Belts.

Code	Size	Length
Shook	7 in. 4 ply	150 ft.
Shred	7 in. 5 ply	125 ft.
Shrub	7 in. 5 ply	150 ft.
Shun	8 in. 4 ply	50 ft.
Shy	8 in. 4 ply	75 ft.
Sick	8 in. 4 ply	100 ft.
Sidle	8 in. 4 ply	125 ft.
Sift	8 in. 4 ply	150 ft.
Sigh	8 in. 5 ply	125 ft.
Silex	8 in. 5 ply	150 ft.
Silly	8 in. 5 ply	160 ft.
Since	8 in. 6 ply	150 ft.
Sinew	8 in. 6 ply	160 ft.
Singe	9 in. 4 ply	150 ft.
Sirup	9 in. 5 ply	150 ft.
Skip	9 in. 5 ply	160 ft.
Skull	9 in. 6 ply	150 ft.
Sky	9 in. 6 ply	160 ft.
Slack	10 in. 5 ply	150 ft.
Slag	10 in. 5 ply	160 ft.
Slam	10 in. 6 ply	150 ft.
Slav	10 in. 6 ply	160 ft.

Page 535

Code	
Slaw	No. 1 U. S. Injector.
Slay	No. 2 U. S. Injector.
Sleek	No. 3 U. S. Injector.
Sleep	No. 4 U. S. Injector.
Sleet	No. 5 U. S. Injector.
Slept	No. 6 U. S. Injector.
Slick	No. FP Steam Gauges.
Slion	No. AT Steam Gauges.

Page 536

Code	
Sloop	No. O Penb. Injectors.
Slum	No. OO Penb. Injectors.
Slur	No. A Penb. Injectors.
Slush	No. AA Penb. Injectors.
Sly	No. B Penb. Injectors.
Smack	No. BB Penb. Injectors.
Smart	No. C Penb. Injectors.
Smash	No. CC Penb. Injectors.
Smell	No. D Penb. Injectors.
Smite	No. DD Penb. Injectors.
Smote	No. 325-O Penb. Injectors.
Smug	No. 326-OO Penb. Injectors.
Smut	No. 328-AA Penb. Injectors.
Snack	No. 330-BB Penb. Injectors.
Snail	No. 332-CC Penb. Injectors.
Snarl	No. 334-DD Penb. Injectors.

Page 558

Code	
Snug	500 bu. Grain Bin.
Soak	1000 bu. Grain Bin.

Page 633

Code	
Tart	2 H. P. Trojan Engine.
Taunt	3 H. P. Trojan Engine.
Teach	5 H. P. Trojan Engine.
Tease	7 H. P. Trojan Engine.
Teem	10 H. P. Trojan Engine.
Tench	15 H. P. Trojan Engine.
Tenet	25 H. P. Trojan Engine.

Page 634

Code	
Sod	No. 5S Saw Frame.
Soda	No. 6SF Saw Frame.
Solar	No. 7S Saw Frame.
Solo	No. 8SF Saw Frame.
Tabor	No. 2190 Saw Frame.

Page 642

Code	
Space	No. 28 Shov. Boards.
Spar	No. 29 Shov. Boards.
Spasm	No. 28A Shov. Boards.
Spat	No. 29A Shov. Boards.
Speak	No. 30 Shov. Boards.
Spice	No. 31 Shov. Boards.
Spill	No. 30A Shov. Boards.
Spire	No. 31A Shov. Boards.
Spirt	No. 32 Shov. Boards.
Spite	No. 33 Shov. Boards.
Spoil	No. 34 Shov. Boards.
Sport	No. 35 Shov. Boards.

Page 643

Code	
Spy	No. 400 Slat Corn Cribs.
Squad	No. 500 Corn Cribs.
Sully	No. 50 Wire Corn Cribs.
Sumac	No. 75 Wire Corn Cribs.

Page 679

Code	
Tepid	No. 6GS Endgate Seeder.
Terse	No. 6WO Endgate Seeder.
Testy	No. 3 Endgate Seeder.
Thaw	No. B55 Sprocket Wheel.

Page 680

Code	
Saxon	No. 11S-14 Wheel Seeder.
Scab	No. 11S-16 Wheel Seeder.
Scalp	No. 12S-14 Wheel Seeder.

Page 682

Code	
Throe	Grain Saving Guards.

List Prices

Prices printed in this Catalog NOT preceded by $ are manufacturers' standard lists.

Where headings are followed by *, it indicates that the prices preceded by $ are same as manufacturers' standard lists.

Where headings are followed by ** or ***, it indicates that the prices preceded by $ are double or triple the manufacturers' standard lists.

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Weed De Luxe Tire Chains

For Automobiles

Made long enough to fit either Cord or Fabric Tires.

Fitted with the Weed hardened cross chains except there is an extra link attached crossways to each of the three center links to give more wear and greater resistance to skidding. New attaching hook makes them easy to put on. Each pair is packed in a strong sack.

Size, ins.	Per pair	Size, ins.	Per pair
30x3½	5.00	33x4½	7.25
32x3½	5.50	34x4½	7.50
31x4	6.00	35x4½	8.00
32x4	6.00	33x5	8.50
33x4	6.50	34x5	8.50
34x4	7.00	35x5	9.00
35x4	7.50	36x5	9.00
32x4½	7.00	37x5	9.75

Rid-O-Skid Tire Chains

For Automobiles

Made in standard lengths of Weed chains, but have not as many cross chains, are not heat treated, nor are the cross chains plated to prevent rusting.

As a preventive of Skidding and a means of Traction they are equally efficient, but afford only a fraction of the mileage which can be secured from Weed's.

Each pair packed in a strong cloth sack.

Size Ins.	Per Pair	Size Ins.	Per Pair
30x3	2.50	34x4	3.20
30x3½	2.65	32x4½	3.25
32x3½	2.80	33x4½	3.40
31x4	2.90	34x4½	3.40
32x4	3.00	35x4½	3.50
33x4	3.10	36x4½	3.60

Weed Balloon Tire Chains

Constructed throughout of material best suited to afford an efficient traction and anti-skid device for this type of tire. Hardened same as regular Weed Chains.

Each pair is packed in a strong cloth sack.

Size	Per pair	Size	Per pair
28x4.40	5.00	32x6.20	9.00
29x4.40	5.00	33x6.20	9.50
30x5.25	6.75	34x7.30	12.00
31x5.25	7.00		

Weed Anti-Skid Tire Chains

For Automobiles

The chains are hardened by a special process and the side chains are galvanized to prevent rusting.

Every cross chain of the genuine Weed is marked Weed on the hooks.

Each pair is packed in a strong cloth sack.

Size Ins.	Per Pair	Size Ins.	Per Pair
30x3½	4.50	33x4½	6.50
32x3½	5.00	34x4½	6.75
31x4	5.50	35x4½	7.25
32x4	5.50	33x5	7.50
33x4	5.75	34x5	7.50
34x4	6.25	35x5	8.00
35x4	6.75	36x5	8.00
32x4½	6.25	37x5	8.75
		36x5½	10.75

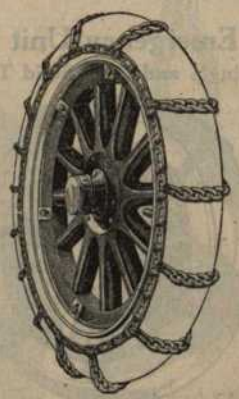
Weed Extra Heavy Tire Chains

Similar to Weed Chains except heavier and afford more traction on muddy roads and give longer service.

Each pair is packed in a strong cloth sack.

Size, ins.	Per pair	Size, ins.	Per pair
30x3½	6.00	34x4	8.00
31x4	7.50	32x4½	8.00
32x4	7.50	34x4½	9.00
33x4	7.75	35x5	10.50

Weed Pneumatic Truck Tire Chains



These chains are made the same as Weed Tire Chains for automobiles, but are especially heavy, for truck use.

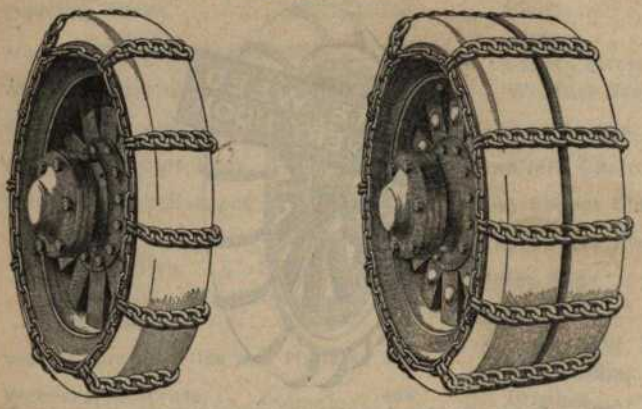
The hardened cross-chains insure great strength and wearing quality.

Each pair is packed in a strong cloth sack.

Size, ins.	Per pair	Size, ins.	Per pair
32x4½	9.00	38x6	12.50
34x4½	9.50	38x7	18.00
35x5	10.50	40x8	20.00
36x5	10.50	42x9	22.00
36x6	11.75	44x10	26.00

Weed Solid Truck Tire Chains

Single or Dual



These chains are an efficient traction and anti-skid device for mud, snow, ice, wet pavements, etc., for solid tires.

Made especially heavy and strong and will satisfactorily meet the requirements of heavy truck service.

Each pair is packed in a strong sack.

For Single Solid Tires

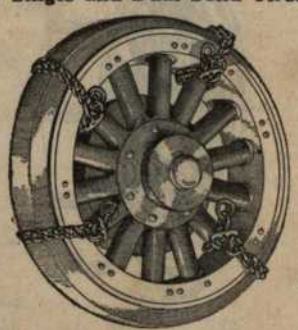
Size, ins.	Per pair	Size, ins.	Per pair
30x3½	7.00	36x4½	11.50
32x3½	7.50	34x5	12.50
34x3½	8.50	36x5	13.50
36x3½	9.50	40x5	15.50
32x4	9.00	36x6	16.00
34x4	10.00	40x6	18.00
36x4	11.00	36x7	17.00
34x4½	10.50	36x8	18.00

For Dual Solid Tires

Size, ins.	Per pair	Size, ins.	Per pair
34x3½	14.00	36x5	19.00
36x3½	15.00	38x5	20.00
34x4	15.00	40x5	21.00
36x4	16.00	40x6	23.00
38x4	17.00	40x7	25.00
40x4	18.00		

Weed Emergency Unit Chains

For Single and Dual Solid Tires

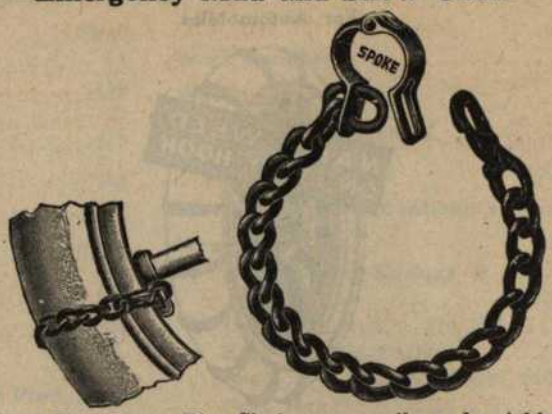


Each chain is a complete unit, requiring no clamps or attachments. These chains do not creep around the tire, and hence are recommended for emergency use rather than continual wearing. Any number desired may be used on each wheel.

Packed 12 chains in a strong sack.

Size, ins.	Single, each	Dual, each
3½	.70	.90
4	.75	1.10
5	.85	1.20
6	.95	1.40
7	1.05	1.60

Emergency Mud and Snow Chain



These Emergency Tire Chains are easily and quickly adjusted. They are so simply constructed that a child can install them. Place the malleable clamp on the spoke, then slip the chain over the tire and hook the snap in the loop. No jacks or tools required.

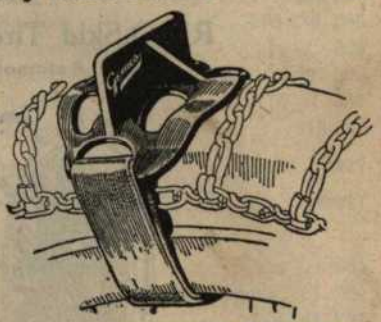
A set of four chains is sufficient to pull out of the mud, sand or snow. Is cheap safety insurance. Packed 1 set in a sack.

State size when ordering.

No. 220B	Size 1½	—For 3 and 3½ inch tires. Set of 4	3.50
No. 220C	Size 2	—For 4 and 4½ inch tires. Set of 4	4.00
No. 220D	Size 3	—For 5 and 5½ inch tires. Set of 4	5.00

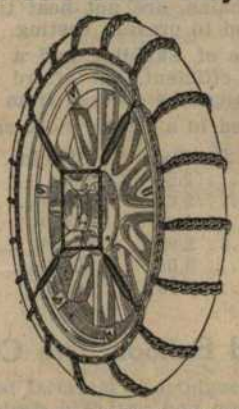
Emergency Mud Hooks

They can be put on when the wheel is in deep mud, and they are sure to get you out. When you are out, take them off. Made of malleable iron.



WITH STRAPS			WITHOUT STRAPS		
No.	For Tire Size, ins.	Per Pair	No.	For Tire Size, ins.	Per Pair
C4844	3-3½	$2.70	C4844L	3-3½	$1.40
C4845	4-4½	$2.90	C4845L	4-4½	$1.60

Weed Tire Chain Adjusters



These adjusters consist of four springs radiating from a center chain surrounding the hub and are attached by simple hooks to the side chain. Holds the tire chain snug, but not tight. Made in four sizes. Packed 1 pair in a box.

No. 1	For 28 to 30-inch tires	Per pair, 1.00
No. 2	For 32 to 34-inch tires	Per pair, 1.00
No. 3	For 35 to 36-inch tires	Per pair, 1.00
No. 4	For 37 to 38-inch tires	Per pair, 1.50

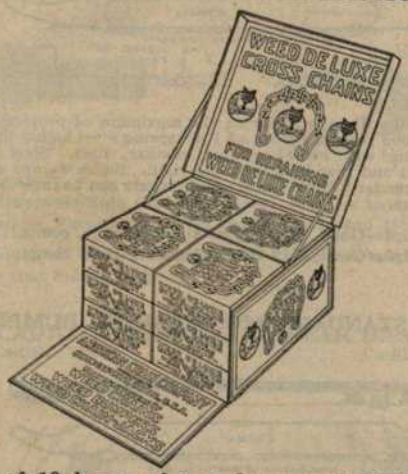
Cross Chains for Tire Chains

Made of special steel and fit exactly the same as the original cross chains.

Prices are per hundred

Size, Ins.	For Weed or Rid-O-Skid Regular Chains	For Weed De Luxe Tire Chains	For Weed Balloon Tire Chains	For Weed Extra Heavy Tire Chains	For Pneumatic Truck Tire Chains	For Single Solid Truck Tire Chains	For Dual Solid Truck Tire Chains
3½	7.25	9.00	.....	9.00	.....	15.00	28.00
4	8.00	10.00	8.00	11.00	.....	19.00	34.00
4½	9.00	11.00	9.00	12.50	12.50	23.00	37.00
5	10.75	13.00	10.75	16.25	16.25	27.00	40.00
5½	13.50	.....	.....	.....	.....	.....	.....
6	.....	.....	15.00	.....	24.00	33.00	44.00
7	.....	.....	18.00	.....	38.00	35.00	48.00
8	.....	.....	.....	.....	41.00	40.00	.....
9	.....	.....	.....	.....	47.00	.....	.....
10	.....	.....	.....	.....	60.00	.....	.....

Weed DeLuxe Cross Chain Assortment



Consists of 12 boxes of one dozen each DeLuxe Cross Chains. 6 boxes contain 3½ inch, and 3 boxes each of 4 and 4½ inch. A total of 12 dozen Cross Chains. Put up in an attractive display box that helps the dealer sell Cross Chains in lots of one dozen.

No. 2 Assortment.....Each 14.04

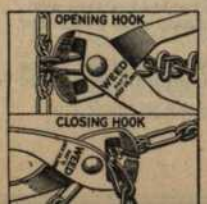
DeLuxe Locking Lever Connecting Hooks

Engaging the Chain. Drawing it in. Locked.

Draws the side chains together with little effort, is securely locked with the pressure of your thumb and remains locked under all conditions, whether the chains are loose or tight.

No. 289—For Passenger Car Chains.....Each, .25
No. 290—For Truck Chains.....Each, .25

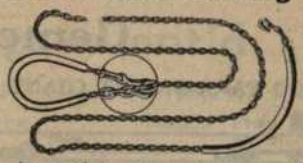
Weed Chain Pliers



For opening and closing the circular hooks on Weed Cross Chains.

They do the work with ease in a few seconds without removing the Chain from the tire.

American Welded Towing Chains



Furnished in two sizes to satisfactorily meet the insistent demands for a real, serviceable, non-kinkable and compact towing device. Made of proof-tested welded coil chain with a special grabhook on each end. No. 100 designed for light weight passenger cars. Length over all 18 feet. Breaking strain 4,525 lbs. Weight 13 lbs. Made of 10-0 Tenso weldless chain with special grab-hook, with 24 inches of strong canvas tubing on each end. No. 2801 designed for medium and heavy weight cars. Length over all 20 feet. Breaking strain 8,000 lbs. Weight 34 lbs. Size ⅜ inch with 24 inches of strong canvas tubing on each end. Chains and hooks are galvanized. Each chain in a strong canvas bag.

No. 100—18-ft......Each, 4.00
No. 2801—20-ft......Each, 9.00

"Basline" Autowline

The original Wire Rope Tow Line. Made of ¼-inch Yellow Strand Wire Rope, 15 ft. long, with patent snaffle hooks for attaching. Strong enough to pull a 4,000-lb. car up a 20% grade; yet it weighs only 4¼ lbs. Coils up flat and goes easily under a cushion, out of the way. Wound around the rim of the wheel, it will serve as a tire chain. One in a bundle.

Basline Autowline.....Each, 4.95

Tire Chain Repairs

Repair Kit

No. 000 Traplink

No. 600 Repair Link

Nos. 582 and 1295 End Hooks

No. 907 Side Hook

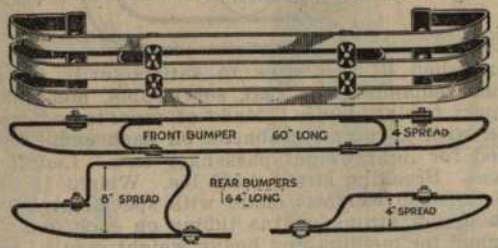
No. 600 repair link is for replacing worn or broken cross links; No. 907 connects the cross chain to the side chains; No. 000 is for repairing side chains and No. 582 is to replace end hooks. No. 1295 is an extra heavy end hook for use on truck tire chains.

The repair kit includes 12 pcs. No. 600, 4 pcs. No. 907, 6 pcs. No. 000, and 2 pcs. No. 582. A very handy kit for any motorist.

No. 600.....Per 100, 1.00
No. 907.....Per 100, .75
No. 000.....Per 100, 2.40
No. 582—Light.....Per 100, 4.00
No. 1295—Heavy.....Per 100, 7.50

Gemco Bumpers and Fittings

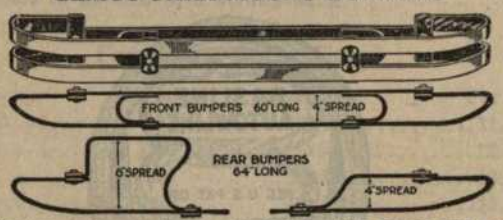
GEMCO PARA-MOUNT GIANT BUMPER



All spring steel, heat treated and oil tempered. Beautifully finished in full nickel with Black and Green ornamental clamps. Resilient steel braces hold bars firm and rigid. Rear Bumpers have open bar braces for spare tire clearance. For all heavy cars. All brackets are interchangeable with these bars.

Para-Mount Giant 1¼" Steel, 3 bars, Nickel, Complete ...$30.00

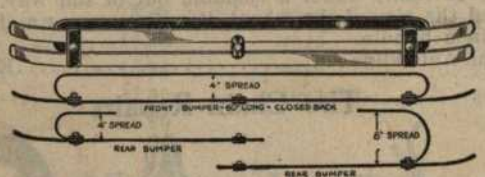
GEMCO PARA-MOUNT BUMPERS



The two spring steel bars extend full width of car and are reinforced by a rear bar joined to looped ends. Resilient braces between front and rear members hold the bars firm and rigid. Beautifully finished in nickel with Black and Green ornamental clamps. Rear Bumpers have open bar braces for spare tires. All brackets are interchangeable with these bars.

Para-Mount 2" Steel, Nickel, Model "BX" Complete, Ea. $23.00
Para-Mount 1¾" Steel, Nickel, Model "C" Complete, Ea... 20.00
Para-Mount 1¼" Steel, Nickel, Model "D" Complete, Ea... 18.00

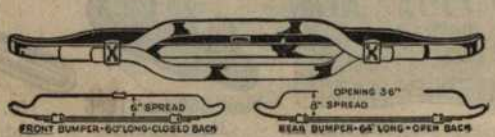
GEMCO PARA-SPRING BUMPER



Made of ⅜' spring steel in widths specified below. Beautifully finished in nickel with black and green ornamental clamp in center. The rear member is made of 2" steel the ends of which are curved in and clamped to the two front bars. Interchangeable with all brackets.

Para-Spring Bumper, 1½" Steel Complete, Nickel.....$15.50
Para-Spring Bumper, 1¾" Steel Complete, Nickel..... 17.00
Para-Spring Bumper, 2" Steel Complete, Nickel..... 18.50

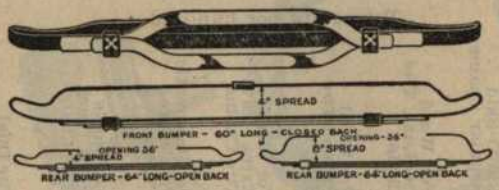
GEMCO GIANT BUMPER



The highest quality bumper offering the maximum of car protection. An all spring steel Bumper, the main bar being one continuous loop to which extra auxiliary bars are fastened. Beautifully finished in all nickel with two nickel ornamental clamps. Rear Bumper has 36" opening for spare tire clearance. For all heavy cars. The 2¼" Giant will not interchange with all brackets. Brackets marked* are recommended for the 2¼" bar.

Giant, 2¼" Steel, all Nickel, Complete, Each.....$27.50
Giant, 2" Steel, all Nickel, Complete, Each 25.00
Giant, 2" Steel, Black, Nickel Auxiliary Bars, Each..... 23.00

GEMCO STANDARD TRIPLE-GARD 2" BUMPER



The main bar is one continuous loop of spring steel clamped together in rear. Made from resilient spring steel. Beautifully finished with nickel or black auxiliary bars. Ornamental Bar Clamps are black and green. All brackets can be interchanged with these bars.

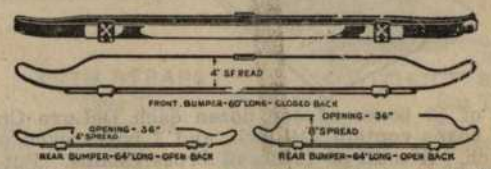
Standard Triple-Gard, 2" Nickel Auxiliary Bars, complete.$20.00
Standard Triple-Gard, 2" Black Auxiliary Bars, complete.. 19.00

GEMCO STANDARD TRIPLE-GARD 1¾" BUMPER

A high quality Bumper, offering the maximum of protection for cars under 3,000 pounds. Built of 1¼" spring steel highly finished in black enamel with nickel or black auxiliary bars. Steel braces hold the front and rear bars firm and rigid. Same clamps as furnished with Standard Triple-Gard. All brackets can be interchanged with these bars.

Standard Triple-Gard, 1¾" Nickel Auxiliary Bars, comp...$17.00
Standard Triple-Gard, 1¾" Black Auxiliary Bars, comp... 16.00

GEMCO STANDARD MONO-SPRING BUMPER



A strong spring steel Bumper made from one continuous loop of 2" steel clamped together in rear. The extra reenforcing bar is furnished in either nickel or black finish. Rear Bumper has 36" opening for spare tire clearance and furnished with 4 and 8" spread. Made the same as the Standard Triple-Gard, except with one straight reenforcing bar and two ornamental Bar clamps. Recommended for all cars.

Standard Mono-Spring, Nickel Auxiliary Bars.....$15.00
Standard Mono-Spring, Black Auxiliary Bars..... 14.00

ALL-KAR AND U-SPRING BRACKETS

All-Kar Bracket—Front and Rear

U-Spring Bracket—Front

All-Kar Bracket — Front and Rear. Attached by slipping slotted parts under spring bolts and bracing by hook attachment. Bumper bar is clamped to bracket by steel clamp and yoke. For All Bars except Giants.

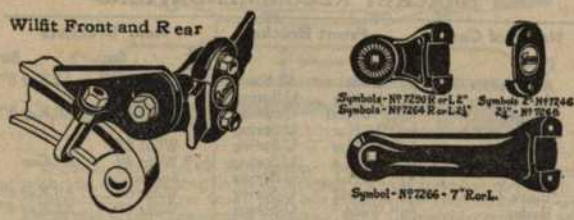
U-Spring Bracket — Front. Fastened by means of the spring bolt; for which special shoulder nuts are furnished; the slotted end allowing proper adjustment.
Important: Specify spring bolt for correct sized nuts.

Prices shown on Bumpers include a pair of brackets for attaching to car.
Orders should state make, model and year of car for which Bumpers are intended.

Gemco Bumpers and Fittings—Cont'd

WILFIT BRACKETS

Wilfit Front and Rear

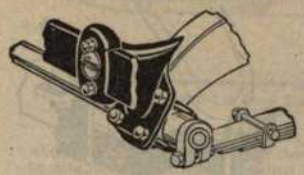


Wilfit Bracket — Front and Rear. Fits any car frame curvature, ratchet allowing adjustment. Attached to car frame by strong yoke. An excellent rear attachment for practically all cars. Punch hole for yoke when Splash Pan interferes.

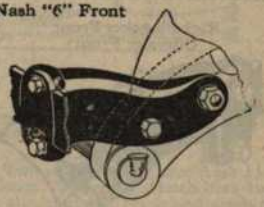
Wilfit Bracket.—7 inch arm. When it is necessary to extend the bumper to allow for an extra spare tire a special 7 inch arm can be furnished. This longer arm bolts directly to the regular Wilfit frame casting. Not furnished unless specified.

NASH "4" AND NASH "6" FRONT BRACKETS

Nash "4" Front



Nash "6" Front



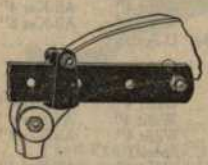
Nash "4" Front. One yoke fastens to crossbar on the inside of frame and the other to spring hanger forging between frame and spring.

Nash "4" Rear. Regular Wilfit Bracket with frame casting reversed.

Nash "6" Front. A malleable iron bracket that is attached to frame by fender cap screw and shoulder nut which fits cross tube bracket bolt as shown in illustration.

ADJ. SIDE CLAMP & BUICK "4" FRONT BRACKETS

Adjustable Side Clamp — Rear



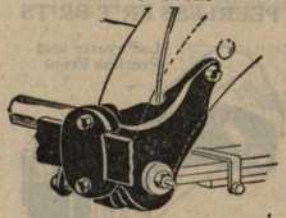
Buick "4" Front

Adjustable Side Clamp — Rear. For cars having a rear frame extension. Furnished in three lengths, 13, 18 and 24 inches.

Buick "4" Front. Attached by spring bolt special nut and cap screw that holds the fender

BUICK "6" FRONT AND REAR BRACKETS

Buick "6" Front



Buick "6" Rear

Buick "6" Front. A strong malleable iron bracket. Fits over end of frame and is attached on the outside by fender pan cap screw furnished, and on inside by using spring hanger using special clip, screw, and bolt, nut and lock washer. No drilling is necessary.
Buick "6" Rear. Attached by punching out rivet in frame and reaming hole for ⅜" bolt. Yoke is placed over frame casting, the flat curved part fitting between cross tube and dust skirt.

CADILLAC FRONT AND REAR BRACKETS

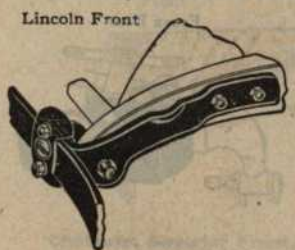
Cadillac Front

Cadillac Rear

Cadillac Front. Attach by replacing spring bolt nut and fastening special hook bolt under lower flange of frame. No drilling.
Cadillac Rear. When attaching, yoke is placed over cross bar on right side and brought to left until it strikes gas filler neck, then place parallel with crossbar and over frame. End hook is bolted to the lower flange of frame. The brace is clamped to cross bar and bracket arm.

LINCOLN FRONT AND REAR BRACKETS

Lincoln Front



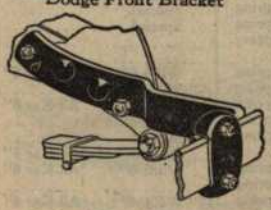
Lincoln Rear

Lincoln Front. A malleable bracket bolted to outside of frame with two strong bolts. The bar is attached to bracket with yoke. Very firm and will not vibrate.

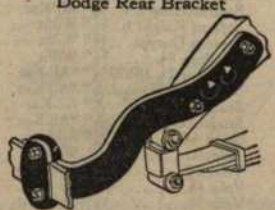
Lincoln Rear. A special malleable bracket designed for the Lincoln Rear. It is fastened to the inner side of the frame by two strong yokes, as shown in the illustration.

DODGE FRONT AND REAR BRACKETS

Dodge Front Bracket



Dodge Rear Bracket



Dodge Front Bracket. Attaches to front frame of car by using the two bolt holes punched in frame. Drilling is not necessary but the splash pan should be loosened so that the bolts can be inserted. Snubbers can be placed over bracket by using longer bolt.

Dodge Rear Bracket. Attach to the car by the same method as the Dodge front. The two bolts furnished with the bracket are inserted thru the holes in the frame of the car. Drilling not necessary. Either Wilfit or Adjustable Side Clamp bracket can be used also.

OAKLAND FRONT AND REAR BRACKETS

Oakland Front

Oakland Rear

Oakland Front. Designed especially for the front of the Oakland Car. It is attached by using snubber hole and reaming fender pan screw hole large enough for inserting the bolt furnished with brackets. A snubber stud should be used when the car is equipped with snubbers.

Oakland Rear. A specially designed bracket for the rear of the Oakland Car. It is attached to the frame of the car by removing the two spring horn rivets and inserting the bolts furnished with the bracket.

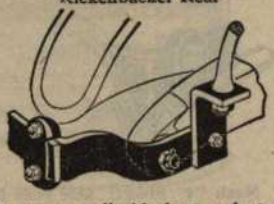
Special Bumper Catalog mailed on request.

Gemco Bumpers and Fittings—Cont'd

RICKENBACKER FRONT AND REAR BRACKETS

Rickenbacker Front
Chrysler Front

Rickenbacker Rear



Rickenbacker Front. Made of strong malleable iron and attached to car by bolting end of bracket over cross bar and replacing spring bolt nut with special shoulder nut and lock washer.

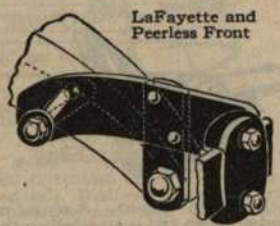
Chrysler Front. Same design as Rickenbacker. Requires larger spring bolt nut.

Rickenbacker Rear. An all steel bracket that is attached to the car by spring bolt and held firmly in position by an angle iron which is fastened to tire carrier lug. Easily and quickly attached.

PACKARD, LAFAYETTE & PEERLESS FR'T BR'TS

Packard Single "6" Front

LaFayette and
Peerless Front



Packard Single "6" Front. A malleable iron bracket that is attached to the car by bolting to cross bar and spring bolt. A special shoulder nut and lock washer is furnished for spring bolt fastening.

LaFayette Front. Fastened to spring bolt and by special hook on lower flange of frame.

Peerless Front. Same as LaFayette, except cross piece is fastened on outside of bracket. Special spring bolt nuts are furnished.

ESSEX FRONT AND REAR BRACKETS

Essex Front

Essex Rear

Essex Front Attached by a hook bolt and special clamp plate which fastens to the lower flange of car frame.

Essex Rear. Attached by placing the yoke and clamp plate around the frame. Slide the "U" Bracket beneath the clamp plate so the hole will fit over the license bracket bolt.

OTHER SPECIAL BRACKETS

Franklin Front—1924 Model. The malleable bracket. Fits over end of frame. Attached by strong bolts.

Franklin Rear. Attaches to car frame. Ream or file first tapped hole nearest to end of frame. Use cap screw and special shoulder nut furnished.

Wills St. Claire Front. Attached to car by drilling two holes in frame to correspond with holes in bracket.

Dort "6" Rear. A special Bracket fastened to car by body bolt and angle iron bolted to gas tank bracket.

Willys Knight Front. Regular Wilfit Bracket with the yoke bent so that it will clear the rivet head under frame. Order special.

Special brackets designed for Stutz "6" Rear, H. C. S. "6" Rear, Case "Y" Front, Case Rear, Durant "6" Rear, Stearns-Knight Rear, Paige Front, Jewett Front, Maxwell Front.

NOTE— As some car models have special combination trunk racks and tire carriers full information could not be obtained at the time of printing this form. The bracket recommendations given are the result of careful investigations, but owing to the many changes in car models at this time they cannot be guaranteed correct.

BRACKET RECOMMENDATIONS

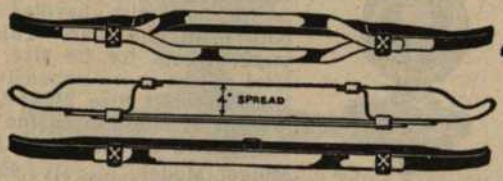
Name of Car	Front Brackets		Rear Brackets		
	Sprg. Bolts		Sprg. Bolts	Bar	Bar
Ambassador 109	5/16"	Wilfit	3/4"	Wilfit 8"	All-Kar 8"
Ambassador 136	5/16"	All-Kar	3/4"	††Wilfit 8"	.....
Anderson	5/16"	*All-Kar	5/8"	Wilfit 4"	*All-Kar 8"
Apperson 6-8	5/16"	All-Kar	..	.....	.....
*Auburn 51	5/16"	All-Kar	..	Wilfit 8"	.....
Auburn 6-43	5/16"	Wilfit	5/8"	Wilfit 4"	All-Kar
Buick 6	11/32"	Special	..	Special	.....
*Buick 4	11/32"	Special	..	Wilfit 8"	All-Kar 4"
Barley	5/16"	Wilfit	..	Wilfit 4"	All-Kar 4"
Cadillac 61	5/16"	Special	..	Special	... ...
Chandler	5/16"	All-Kar	3/4"	Wilfit 8"	.....
Cleveland 6-41	5/16"	Wilfit	5/8"	Wilfit 4"	All Kar 4"
Chalmers	5/16"	*All-Kar	..	Wilfit 8"	.....
Chrysler	5/16"	Special	..	Wilfit 4"	.....
Cole	5/16"	Wilfit	..	Wilfit 8"	.....
Columbia Big 6	5/16"	All-Kar	..	Special	.....
Columbia Light 6	5/16"	All-Kar	7/8"	Wilfit 8"	All-Kar 8"
Courier	5/16"	All-Kar	..	Wilfit 8"	All-Kar 8"
Daniels D. 19	.....	All-Kar	..	.....	.....
Davis Heavy 6	5/16"	Wilfit	..	Wilfit 8"	All-Kar 8"
Davis L. 6-70 Tour	5/16"	Wilfit	..	Wilfit 4"	All-Kar 4"
Dixie Flyer	5/16"	Wilfit	..	.....	.....
Dodge	5/16"	Special	5/8"	Special	U-Spring
Dorris 680	5/16"	*All-Kar	..	.... 4"	.....
Dort 4 and 6	7/32"	All-Kar	..	Special	.....
Durant 4	5/16"	All-Kar	5/8"	13" Adj. S. C.	8"
Durant 6	5/16"	All-Kar	..	Special	.....
Earl	.....	All-Kar	..	Wilfit 4"	All-Kar 4"
Elcar G 6	.....	Wilfit	..	Wilfit 8"	All-Kar 8"
Elcar 4-40 D	5/16"	All-Kar	5/8"	U-Spring	.....
Elgin 70	7/32"	All-Kar	..	.....	.....
Essex 7 A	5/16"	Special	..	Special	.....
Franklin	.....	Special	..	Special	.....
Gardner	1/8"	All-Kar	..	Wilfit 4"	All-Kar 4"
Grant H Z	.....	Wilfit	..	Wilfit 4"	All-Kar 4"
Hanson 60	.....	Wilfit	..	Wilfit 4"	All-Kar 4"
H. C. S.	5/16"	All-Kar	..	Special	.....
Hudson	7/32"	*All-Kar	..	Wilfit 4"	All-Kar 4"
Huffman	.....	Wilfit	..	Wilfit 4"	All-Kar 4"
Hupmobile R	1/4"	(Wilfit c.p.)	3/4"	Wilfit 8"	*All-Kar 8"
Jackson 6-38	.....	*All-Kar	..	Wilfit 8"	*All-Kar 8"
Jewett	5/16"	Special	5/8"	Wilfit 8"	All-Kar 8"
Jordan	5/16"	Wilfit	5/8"	Wilfit 4"	.....
King J	5/16"	All-Kar	..	.....	.....
Kissel Kar Tour	3/4"	All-Kar	3/4"	Wilfit 4"	*All-Kar 4"
Lafayette	.....	Special	..	.....	.....
Lexington U	5/16"	Wilfit	..	Wilfit 8"	*All-Kar 4"
Liberty	7/32"	All-Kar	7/32"	Wilfit 4"	All-Kar 4"
Lincoln	.....	Special	..	††Wilfit 4"	.....
Marmon 34	5/16"	*All-Kar	..	.....	.....
Maxwell	5/16"	Special	5/8"	Wilfit 8"	All-Kar 8"
Mercer	5/16"	Wilfit	..	Wilfit 8"	.....
Moon 6-40	5/16"	Wilfit	5/8"	Wilfit 8"	All-Kar 8"
Moon 6-58	5/16"	Wilfit	5/8"	Wilfit 8"	All-Kar 8"
Nash 6 Tour	5/16"	Special	5/8"	Wilfit 4"	.....
Nash 4	.....	Special	5/8"	Special	.....
National 6-71	5/16"	All-Kar	5/8"	Wilfit 8"	All-Kar 8"
National 6-51	5/16"	*All-Kar	5/8"	Wilfit 4"	*All-Kar 4"
National 31	5/16"	All-Kar	5/8"	Wilfit 8"	All-Kar 8"
Oakland 34-44	5/16"	All-Kar	..	Wilfit 4"	All-Kar 4"
Oldsmobile 6	5/16"	All-Kar	5/8"	Wilfit 4"	*All-Kar 4"
Packard Light 6	5/16"	Special	..	Wilfit 8"	All-Kar 8"
Paige 6-66	5/16"	Special	..	Wilfit 8"	All-Kar 8"
Paige 6-70	5/16"	.....	5/8"	.....	.....
Paterson 52	5/16"	All-Kar	..	Wilfit 4"	.....
Peerless	5/16"	Special	..	13" side Adj.	8" Bar.
Pilot 6-55	5/16"	*All-Kar	..	.....	.....
Premier 6-D	5/16"	Wilfit	..	Wilfit 8"	.....
Reo 6	5/16"	.....	5/8"	Wilfit 4"	*All-Kar 4"
Rickenbacher	7/32"	Special	7/32"	Special	.....
Roamer	5/16"	All-Kar	..	††Wilfit 8"	.....
Rollin	5/16"	All-Kar	..	.....	Special
R. & V. Knight	5/16"	All-Kar	..	Wilfit 8"	.....
Sayers 6 Tour	5/16"	All-Kar	..	Wilfit 4"	All-Kar 4"
Sayers 6 Sedan	5/16"	All-Kar	..	.....	.....
Seneca L. 2	5/16"	All-Kar	..	.....	.....
Standard II	5/16"	.....	5/8"	Wilfit 8"	All-Kar 8"
Stearns Knight 4	5/16"	All-Kar	..	Special	.....
Stearns Knight 6	5/16"	Wilfit	..	Special	.....
Stevens Duryea	11/32"	Wilfit	..	.....	.....
Stephens 94	5/16"	Wilfit	..	.....	.....
Stephens 24, 18&97	5/16"	*All-Kar	..	Wilfit 8"	*All-Kar 8"
Studebaker Special	7/32"	*All-Kar	7/32"	Wilfit 8"	.....
Studebaker L. 6	7/32"	All-Kar	7/32"	Wilfit 8"	All-Kar 8"
Studebaker B. 6	7/32"	*All-Kar	7/32"	Wilfit 8"	.....
Stutz 4-6	1/4"	All-Kar	5/16"	Special	
Templar	.....	Wilfit	..	Wilfit 4"	*All-Kar 4"
Velie 34	5/16"	*All-Kar	..	Wilfit 4"	*All-Kar 4"
Velie 48	5/16"	All-Kar	..	.....	.....
Velie 58	5/16"	*All-Kar	1/2"	Wilfit 4"	All-Kar 4"
†Westcott B 44	5/16"	All-Kar	..	Wilfit 8"	.....
†Westcott D 48	5/16"	Wilfit	..	.....	.....
Willys Knight 64	.....	Special	..	Wilfit 4"	.....
Wills St. Claire	.....	Special	..	Wilfit 4"	.....

*File off boss side of spring hanger for better bracket bearing.
††Use 7" sleeve.

Special Bumper Catalog mailed on request.

Gemco Bumpers and Fittings—Cont'd

GEMCO SMALL-KAR BUMPERS



Gemco Small-Kar Bumpers. Made of 1¼-inch spring steel with the ends turning in and clamped to rear member as shown in illustration. The two front bars are clamped to the main bar with black and green ornamental clamps. Only furnished complete with brackets.

Wide Face, Nickel Bars Complete $15.00
Wide Face, Black Bars Complete 14.00
Single Face, Nickel Bars Complete 12.00
Single Face, Black Bars Complete 11.00

When ordering specify whether wide or single face, front or rear, make of car, nickel or black finish.

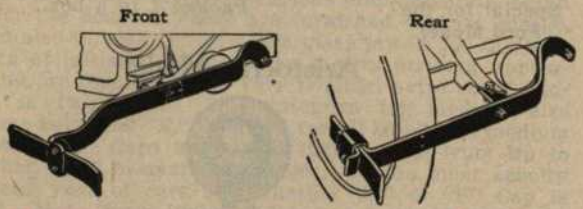
GEMCO PARA-FLEX BUMPERS

Gemco Para-Flex Bumpers. Two strong spring stee lbars 1½" wide and ⅜" thick and 60 inches long. The ends of both bars turn in slightly. Beautifully finished in all nickel with black and green ornamental clamp in center. Packed and shipped complete in individual cartons. Method of attaching the brackets is the same as the Small-Kar.

Para-Flex Bumper, Nickel Bars $13.50
Para-Flex Bumper, Black Bars 12.50

When ordering, specify whether front or rear, nickel or black finish.

BUMPERS FOR FORDS

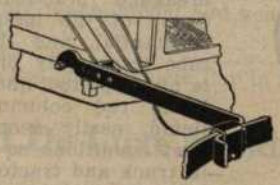


Ford Front. (1924) (Side-Arm Type.) Attached to bottom of lamp bracket and a hook bolt to car frame at end of bracket. Will not interfere with Lincoln, Gabriel or Hasseler Shock Absorbers.

Ford Rear. Strong steel bracket. Bolted to cross bar channel of car frame with body bolt and held firmly in position by hook fastened to frame of car. Will not interfere with Lincoln, Gabriel or Hasseler Shock Absorbers.

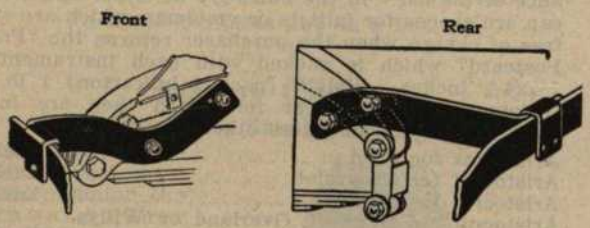
CHEVROLET SUPERIOR BUMPERS

(Hook-on Type) Front



Chevrolet Front. Attached to the car by fender bracket cap screw and hook bracket on lower flange of frame. Bracket rests on end of cross channel. No drilling.

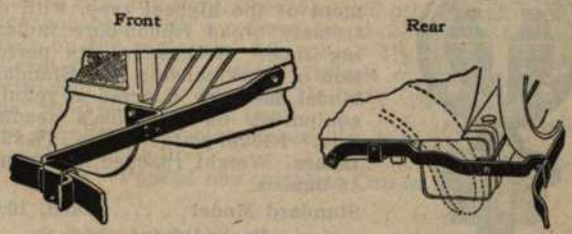
STAR BUMPERS



Star Front Bracket. Attached by inserting bolt thru hole in frame and fastening hook bolt on lower flange of frame.

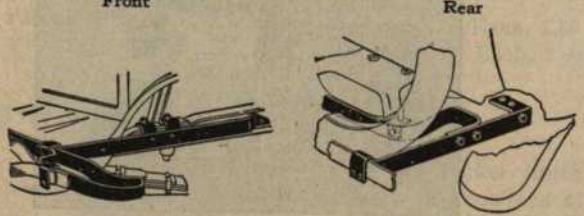
Star Rear. Fastened securely to car frame by strong yoke. A spacer is used between bracket and frame for rivet extension.

CHEVROLET SUPERIOR BUMPERS



Chevrolet Superior Front. Attached to car by drilling hole in frame and replacing fender bracket bolt with those furnished. **Chevrolet Rear.** The special clamp plate or angle bracket and the hook bolt on end of bracket arm fastens to lower flange of car frame. No drilling. A tie rod with wood spacer is fastened between the bracket arms. Will fit all models.

OVERLAND FRONT AND REAR BUMPERS

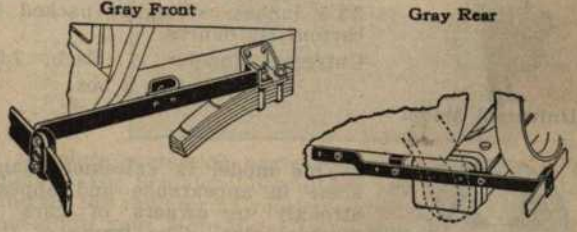


Overland Front. Bracket is attached to the car by fender bracket and the lower steering bracket bolts on web of frame using bolts furnished with bracket.

Overland Rear. The brace fastens to spring clip and end of bracket to body sill. Two different lengths — Specify model when ordering.

"Champion" Model — Requires special bracket. Order special.

GRAY BUMPERS



Gray Front. Bolted to car frame and attached to spring yoke by angle bracket adjustable for different models.

Gray Rear. Attached by bolting the angle extension against the lower side of body support bracket and to frame of car as illustrated. A tie rod holds bar form and rigid.

Small-Kar and Para-Flex Bumpers are furnished complete with brackets for Ford, Chevrolet, Overland, Star or Gray. Orders must specify make, model and year of car for which Bumpers are intended.

BOYCE MOTO METER

De Luxe Model

Designed for the highest grade passenger cars. The indicating tube is one half inch in diameter, having a broad column of red liquid readable at a great distance. The case is triple nickel-plated, and the finish of the entire instrument is of the highest quality of workmanship. Size 3⅜ x 5¾ inches.

Each De Luxe instrument is equipped with a Schlaich Chain Lock, offering protection to both instrument and radiator cap against theft. Entire weight (packed in carton), 23½ ounces.

De Luxe Model (including Schlaich Chain Lock) . Each, 15.00

Packed 1 in a box.

Truck and Tractor Model

Designed especially for severe conditions, such as for use on trucks and tractors; diameter of indicating tube is one-half inch, making breakage practically impossible; frame of the instrument is very substantial, and the thermometer tube thoroughly protected; casing is nickel-plated, and the tube has a broad red column of indicating liquid, easily seen regardless of dust conditions so often met with in truck and tractor service. Size, 2⅞ x 4¾ inches. Weight (packed in carton), 16 ounces.

Truck and Tractor Model, ...Each, 10.00

Packed 1 in a box.

Standard Model

A perfect heat-recording instrument of the highest type, with extremely broad ribbon-bore indicating tube. Because of its perfection of workmanship, the Standard Model has been selected as regular equipment on America's leading cars. Nickel-plated. Size, 3⅜x5½ inches. Weight (packed in carton), 16 ounces.

Standard Model . . . . . Each, 10.00

Packed 1 in a box.

Universal Model

Slightly smaller than the Standard Model, finished in all nickel. A very beautiful instrument. Beveled crystals add to its appearance. Its handsome open face is more easily read than a clock. Size, 3 x 5 inches. Weight (packed in carton), 12 ounces.

Universal Model . . . . Each, 7.50

Packed 1 in a box.

Junior Model

This model is extremely handsome in appearance and appeals strongly to owners of cars of medium size. The frame of this instrument is heavily nickel-plated, and it has the same indicating range as the Standard and Universal Models. Size, 3x4⅞ inches. Weight (packed in carton), 8 ounces.

Junior Model . . . . . Each, 5.00

Packed 1 in a box.

Midget Model

Designed for use on small cars. It has a polished nickel frame, and is finished with beveled crystals both front and rear. This instrument, except for its size, is identical to the more expensive Boyce Moto-Meters. Size 2¼x4¼ inches. Weight (packed in carton) 10 ozs. Cap shown in cut is not included.

Midget Model. . . . . Each, 3.50

Packed 1 in a box.

Special for the Ford Model

This is an investment that every Ford owner should make. It has beveled crystals both front and rear, and is supplied complete with Condensite radiator cap. Size 2½x 4¼ inches. Weight (packed in carton) 12 ozs.

Special for the Ford Model .....Each, 4.00

Packed 1 in a box.

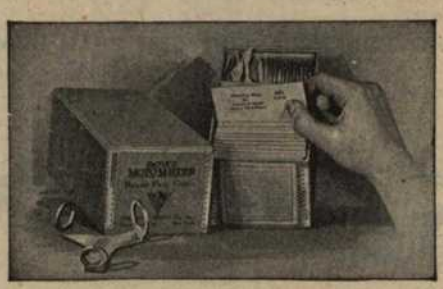
Aristocrat Model

This model is one of the most attractive features in the Boyce Moto-Meter line. The instrument itself is the Midget Model mounted on a Schlaich Cap Lock, which not only insures against theft, but adds remarkably to the appearance of the car. In the bull's-eye at either end of the bar cap are spaces for initials or emblems, which are supplied free of charge when the purchaser returns the "Free Dial Postcard" which is packed with each instrument. Size 7¼x4⅞ inches. Weight (packed in carton) 1 lb. 14 oz. Orders should show car for which they are intended. Ford Model shipped unless otherwise specified.

Aristocrat for Ford . . . . . Each, 7.00
Aristocrat for Chevrolet . . . . . Each, 7.50
Aristocrat for Star . . . . . Each, 7.50
Aristocrat for Maxwell, Overland or Willys-Knight . . . . . Each, 7.50
Aristocrat for Gray. . . . . Each, 7.50

Packed 1 in a box.

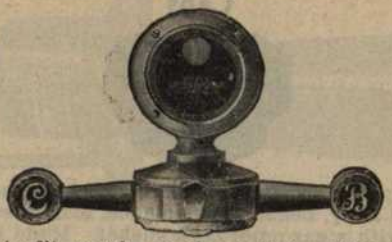
Boyce Moto-Meter Repair Parts Outfit



Every Boyce Moto-Meter Service Station should have a Repair Parts Outfit. With a Kit of this sort the dealer is able to make a large number of minor repairs, such as replacing broken crystals, retaining rings, missing screws, etc. The different parts are packed in individual containers—each properly marked with the contents and the list price of each part. The entire outfit is packed in a strong fibreboard box, 4¼x3¾x8¼ ins. Weight 2 lbs. 6 ozs.

No. 081 Repair Outfit. . . . . Each, 5.00

Schlaich Cap Locks



Designed to fit snugly on the radiator filler neck, keeping the Moto-Meter at correct elevation for best temperature indication and out of driver's vision. Trimly proportioned radiator caps with a patented set screw on the insert which provides a POSITIVE LOCK for every type of Moto-Meter. Clasp in front of cap releases cover, which tips back, allowing ample clearance for filling the radiator. Designed with narrow diameter for cars with narrow radiators—will not strike the engine hood when raised. Full directions included with each lock. Initial discs and crests easily interchanged by removing bezel plate with coin or screw driver. A complete assortment of fraternal emblems, as well as initials, is available to every purchaser. Return Postcard included with every caplock eliminates any detail work for the dealer. These are furnished without charge. We can also furnish red or green glass jewels for the bars in place of initials. These make a very striking appearance and are furnished at a very nominal extra cost. Furnished in two sizes: "A," intended for medium size and large cars, and "F," intended for all small and medium size cars. "A" Caps measure 8 inches wide from tip to tip of bar. "F" measures 7 inches. Orders must specify make and year of cars and whether "A" or "F" Cap is wanted. Moto-Meter illustrated is not included except as ordered extra. Orders must state make, model and year of car and whether "A" or "F" Cap is wanted.

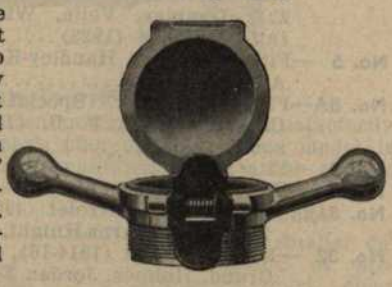
"A" Cap complete with insert.....Each, 6.00
"A" Cap without insert.....Each, 4.75
Insert only to fit various cars with "A" Caps....Each, 1.25
"F" Cap complete with insert.....Each, 4.00
"F" Cap without insert.....Each, 3.50
Insert only to fit various cars with "F" Caps...Each, .50
Red and Green Jewels for "A" or "F" Caps..Per pair, .50

Packed 1 complete Cap in a box.

Snappy Caps

Type "F" for Ford Cars and Gray Cars.

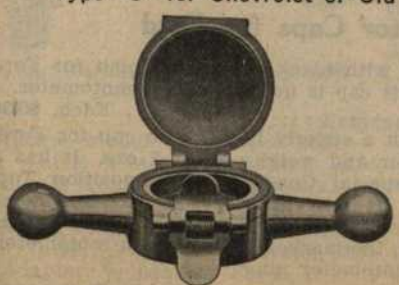
"Snappy Cap" is the cleanest, handiest, most attractive radiator cap obtainable. Screw "Snappy Cap" down, set the wings straight, and leave it there. To open "press the trigger." Adds greatly to the appearance of the car. Bar spread approximately 5½ inches. Furnished in two finishes:



Type FH—Half nickel.....Each, 1.50
Type FN—Full nickel.....Each, 2.00

Packed 1 in a box.

Type "C" for Chevrolet or Old Model Maxwell.

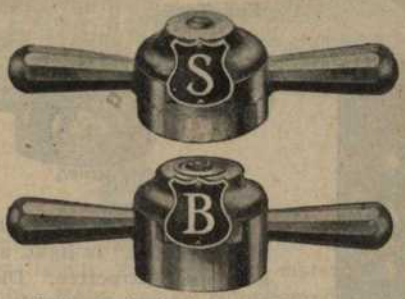


Full nickel finish with a bar spread of 5½ inches. Fits Chevrolet 490, Maxwell up to 1918, and other cars. Same opening feature as Snappy Caps for Ford.

Type "C"—Full nickel.....Each, 2.25

Packed 1 in a box.

De Luxe Locking Caps



Graceful and sturdy in design. Will harmonize with lines of large cars. Key is provided to lock the cap securely in place and a special locking device is also provided for the Moto-Meter. In finish this cap will match the most beautifully nickeled or silvered radiator, being highly buffed nickel over a ground coat of copper. Furnished with either a beautiful Initial or Lodge Emblem. The special alloy from which the cap is made is exceptionally strong and non-corrosive. Has 8 in. bar spread. The hinge cover in which the Moto-Meter is locked gives access to the radiator for filling without the necessity of removing the cap. The special hinge spring latch holds the cap cover firmly closed and absolutely steam and water tight. Orders must state make, model and year of car for which cap is intended.

De Luxe Locking Caps.....Each, 5.50

Packed one complete Cap in a box.

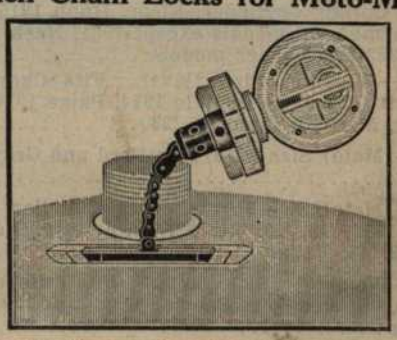
Special De Luxe Locking Caps

Similar to other De Luxe Caps except smaller, to harmonize with the Ford, Chevrolet and other small cars. The hexagon bars with a moto-meter make a very fine appearance on the radiator. Bar spread 6½ inches. Very high nickel finish over copper. Initials or fraternal emblems furnished same as on other De Luxe Caps.

No. 30—For Ford and Gray.....Each, 3.75
No. 31—For Chevrolet, Essex Six, Star and Oldsmobile Six.....Each, 4.00

Packed one complete Cap in a box.

Schlaich Chain Locks for Moto-Meters



Absolute protection against theft of your Boyce Moto-Meter. The Schlaich Lock allows you to unscrew the cap and fill the radiator as you have always done. But it does not allow your Moto-Meter to be stolen. It cannot be removed from the car. Easily attached without drilling or mechanical work of any kind. Adjustable to any depth radiator neck. Every De Luxe Moto-Meter that leaves the Moto-Meter factory is equipped by them with the Schlaich Chain Lock. Nozzle and channel bar solid brass, nickel plated.

No.	Size, ins.	For Boyce Moto-Meter Models	Each
2	⅝	"Standard" and "Universal"	1.80
3	¹⁵⁄₁₆	"Junior," "Ford" and "Midget"	1.80

Packed one in a box.

Radiator Caps on Display Card

For Ford

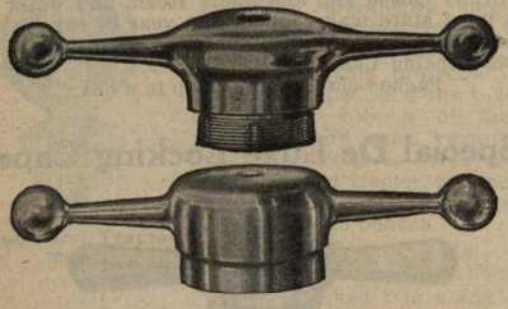
Made of aluminum alloy, heavily nickel plated. Is light, strong, durable and attractive. Display card as shown supplied with each dozen caps.

The dumbbell shape has an advantage through better leverage offered. It will not heat as readily or hold the heat as long as the old style caps.

No. 41. . . . . Per doz., $7.20

Packed one in a box.

Silver Bar Radiator Caps



Made from high-grade phosphor bronze, heavily nickeled. Made in following sizes to fit practically all cars:

No. 1554—(Female) Size 1¾x16. Fits Chevrolet 490, late model, Maxwell 1915, '16 '17, '18. . . . . Each, $2.00

No. 1556—(Male) Size 2⅛x16. Fits Chalmers, Davis, Haynes, Imperial, Jordan, King, Lexington, Liberty, Mitchell, Moon 1921, '22, '23, National 1915, Oldsmobile 43A, 46, 47, 37, 45, Premier, Pierce Arrow, Scripps-Booth late models, Stutz early models and White. . . . . Each, $2.00

No. 1556A—(Male) Size 2x16. Fits Apperson early models, Chevrolet Baby Grand early models, Chevrolet Royal Mail early models. . . . . Each, $2.00

No. 1557—(Female) Size 2⅛x16. Fits Auburn, Buick, Durant 4-cylinder, Elcar, Hupp 1915, '16, '17, Marmon, all models except 1921, Nash, Oakland 1923 and earlier models. . . . . Each, $2.00

No. 1557A—(Female) Size 2⅛x18. Fits Chevrolet little six, Elcar, Oldsmobile 1914, Paige 1914 and earlier, Marmon 1921, '22, '23. . . . . Each, $2.00

No. 1558—(Male) Size 2x18. Fits Ford and Gray. . . . . Each, $2.00

No. 1559—(Male) Size 2⅛x14. Fits Chandler, Cole, Elgin 1918, '19, '20, '21, '22, '23, Jewett, Oldsmobile 42, 43, Paige. . . . . Each, $2.00

No. 1560—(Female) Size 2x18. Fits Cleveland, Dodge, Studebaker Special Six and regular models. . . . . Each, $2.00

No. 1560A—(Female) Size 2x16. Fits Maxwell 1919, '20, '21, '22, '23, Willys-Knight 1922, '23, Rickenbacker. . . . . Each, $2.00

No. 1561—(Female) Size 1⅞x16. Fits Hupp 1918, '19, '20, '21, '22, '23. . . . . Each, $2.00

No. 1562—(Female) Size 2¼x16. Fits Cadillac, Chevrolet Baby Grand, Chevrolet Royal Mail, Chalmers '22, '23, Columbia all models, Dort, Durant 6-cyl., Essex, Gardner, Grant, Hudson 6-40, Hudson Super Six, Lexington '23, Lincoln, Moon early model, Peerless, Stearns-Knight 8-cyl., Velie 1916, Wills-Saint Claire. . . . . Each, $2.00

Packed one in a box.

Replacement Radiator and Gasoline Tank Caps

These Caps are carefully machined from an unbreakable white metal alloy, beautifully finished, accurately threaded and fitted with a gas-proof cork gasket. Made in following sizes to fit practically all cars:

Replacement Radiator Caps

No. 100 —Fits Chevrolet 490. . . . . Each .75

No. 101 —Fits Briscoe (all models). . . . . Each .75

No. 101A—Fits Hupp (1918-22). . . . . Each .75

No. 102. —Fits Maxwell (1918-23), Rickenbacker. Each .75

No. 102A—Fits Cleveland, Cole (1916 and ear.), Dodge. . . . . Each .75

No. 103 —Fits Studebaker, Buick (4 Cyl., 6 Cyl.), Durant (4 Cyl.), Nash (all models), Oakland (1917-22), Saxon, Stearns-Knight, Hupp (1915-16-17), Marmon (1917-19), Elcar. . . . . Each .75

No. 104 —Fits Cadillac, Chevrolet (all models except 490), Columbia, Dort, Durant (6 Cyl.), Essex, Gardner, Grant, Hudson, Lafayette, Peerless, R. & V. Knight, Wills-St. Claire, Yellow Cab. . . . . Each .75

No. 131 —Fits Chalmers (1921 and Ear.), Apperson (1917 and Ear.), Davis (1920 and Ear.), Haynes, Jordan (1918-21), Lexington (S. & T.), Case (1913-15), Pierce-Arrow (1917-22), Saxon (6 Cyl.), H. C. S. Moon, National (1917 & Ear.), Oldsmobile, Scripps-Booth (1919-22), Stearns-Knight (1922), Stutz (1917 & Ear.), Jewett. . . . . Each .75

Replacement Gasoline Tank Caps

No. 1 —Fits Overland 4. . . . . Each .75

No. 2 —Fits Studebaker Light Six, Willys-Overland, Maxwell (1922), Franklin (all models). . . . . Each .75

No. 2C—Fits Nash. . . . . Each .75

No. 4 —Fits Essex, Hudson (1921-22), Grant, Jordon M, Auburn, Columbia, Dort (1920-22), Templar, Velie, Winton, Buick 4 (all), Buick 6 (1923). . . . . Each .75

No. 5 —Fits Dodge, Handley-Knight, Kissel, Allen. . . . . Each .75

No. 5A—Fits Studebaker (Special and Big Six), Chevrolet Mod. F. B. (1918-22), Anderson. . . . . Each .75

No. 6 —Fits Buick. . . . . Each .75

No. 7 —Fits Chalmers. . . . . Each .75

No. 31B—Fits Paige, Chevrolet (490 Open Models), Stearns-Knight, Ford. . . . . Each .75

No. 32 —Fits Chevrolet (1914-16), Chevrolet Baby Grand, Holmes, Jordan F, Liberty, Packard Six, Sheriden. . . . . Each .75

No. 33A—Fits Hudson (1916-20), Oldsmobile. . . . Each .75

No. 50 —Fits Reo. . . . . Each .75

Packed one in a box.

Radiator Caps for Ford

A white metal cap with black japanned finish for Ford at a lower price. This cap is not drilled for motometer.

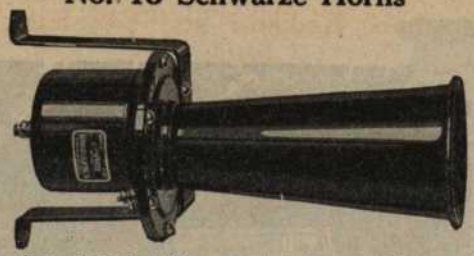
No. 11. . . . . Each, $0.30

We can also furnish a strictly high grade cap for Ford. 2½ inches in diameter and weighs about 3 ozs. It has a brass base with a special Condensite Composition Top, which is not affected by heat. This cap is very handsome and will compare favorably with the caps furnished on the highest priced cars on the market. Has hole for motometer, fitted with regular motometer plug.

No. 58. . . . . Each, $0.80

Packed one in a box.

No. 15 Schwarze Horns



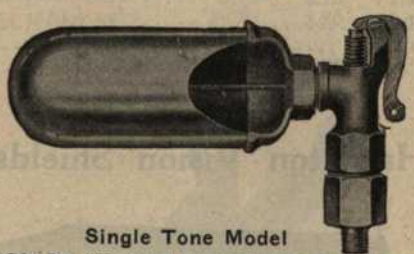
A warning signal with great volume of pleasing and penetrating tone. Absolutely positive and instantaneous in action. Handsomely finished in black enamel for outside or under hood installation. Its accurately machined motor frame construction insures perfect alignment of motor shaft and consequent durability and efficiency. Special oiling devices permit oiling of motor shaft without removal of back cap. Instantly accessible and simple tone adjustment. Large special steel diaphragm. Its powerful motor and handsome design and finish make it an instrument of which any motorist may be proud. Packed one in a carton with bracket. Weight 5 lbs. Furnished in either 6 or 12 volt; also furnished with different types of brackets as listed. 6 volt shipped unless otherwise specified.

No. 15D —With dash bracket as illustrated....Each, 7.50
No. 15M —With motor mounting bracket.....Each, 7.50
No. 15UF—With special bracket for Ford.....Each, 7.50

Buell Explosion Whistles

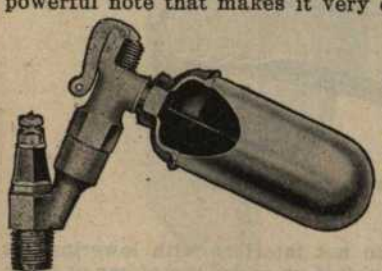
Chime Model

Suitable for all sized motors. It is a very satisfactory signal for even the most expensive cars. Has a mellow sound blown lightly and a commanding tone when opened full.



Single Tone Model

Also suitable for all sized motors and works satisfactorily through the special spark plug opening. This model is equipment with eighty-two manufacturers. It has a clear powerful note that makes it very effective.



Buell Junior

This is a smaller design capable of providing a good, clear warning note. It is not as heavily built as the standard Buell models but is operated on the same principle. Particularly adapted for use with spark plugs. Adapters and spark plugs furnished only when ordered and at extra cost.

	Regular	With Special Spark Plug	With Adapter
Chime Model. Complete with Valve, ⅛-inch pipe thread...6.00		7.00	....
Single Tone Model. Complete with Valve, ⅛-inch pipe thd.4.50		5.50	....
Buell Junior. Complete with Valve, ⅛-inch pipe thread..3.00		4.00	3.50
Adapter, ½-inch, for Ford.....		....	.50
Special Spark Plugs, ½, ⅞ or ⅞ long, extra.....			1.00

No. 10 Schwarze Horns

A handsomely finished Motor Horn for under hood or outside installation, made of best materials and perfect workmanship. Motor has no complicated parts to get out of order; 7-inch sound projector; special steel diaphragm; powerful motor with quick get-away. Operates from regular starting and lighting battery, with minimum current consumption, giving a loud, penetrating, pleasing warning, without starting or racing the engine. Tone can be easily adjusted without removing any part of the horn. Packed one in a carton with bracket. Weight 4 lbs. Furnished in either 6 or 12 volt, also furnished with brackets for different makes of cars as listed below. 6-volt shipped unless otherwise specified.

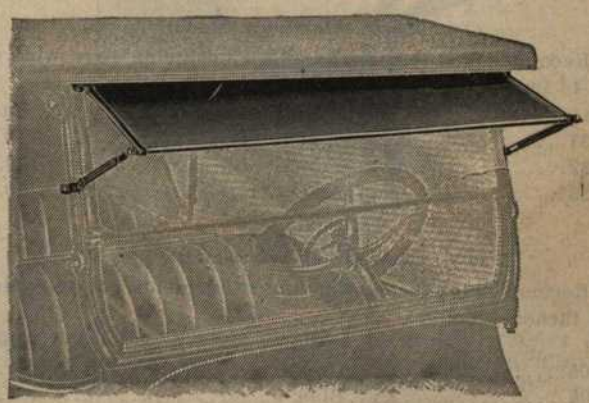
No. 10M —With cylinder head mounting bracket.Each, 5.00
No. 10UF—With special bracket for Ford.....Each, 5.00
No. 10C —With dash installation bracket for Chevrolet. . .....Each, 5.00

Fabric Visors

Made of high grade waterproof fabric, black on top and green underneath, over an electrically welded steel frame heavily black enameled. Friction cup adjusting clamps with thumb screw attach securely to top of car and allow the visor to be quickly adjusted to any angle. Will fit either open or closed cars. Packed one or five in a box.

No. 135—Fabric Visors, in individual cartons..Each, 3.00
No. 1355—Fabric Visors, 5 in a carton.....Each, 2.80

Williams Visors

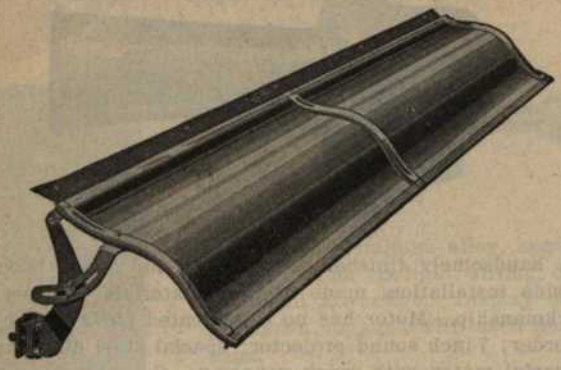


An exceptionally neat, well made visor. It is rigidly supported at any angle by adjustable brace arms, which hold it immovable in the strongest wind. Frame is of spring steel, formed so as to hold cover always under tension. Covered with single-coated material, black on top, green drill underneath. One size fits 90 per cent of all cars, open or closed.

Packed six in a carton, complete with all fittings for attaching to either open or closed cars. When requested, special fittings for Ford open cars are furnished, which make attachment easier and quicker.

No. F2—Williams Visors.....Each, 3.00

Premier Visors



Beautiful, strong, reinforced in both aluminum and black frames, with exclusive, moulded, full-floating, pre-formed, twin Pyralin Panes. Absolutely prevents sagging, warping and wrinkling. Quadrant angle attaching brackets; Fabrikoid weather strip. This exclusive design gives unbelievable strength; absolutely no vibration regardless of speed or wind pressure. Easily adjustable to any angle.

Standard Model—40 in. by 10 in., fits the majority of cars. Beautiful black enameloid frame; black enameled brackets, nickel trim.

Mogul Model—44 in. by 10 in., designed to fit cars having extra wide windshields. A visor de luxe—extra finely finished frame, all-nickel brackets and trim.

Furnished in both Aluminum and Black Models in Green, Blue and Amber colors. Both models are complete with brackets for open or closed bodies. Each Visor is individually packed in a heavy corrugated carton suitable for single parcel post package. Five Visor cartons are packed in a standard package.

Standard Aluminum Model

Recommended for cars having windshields not exceeding 42 inches wide.

No.	Color	Each
2125	Green	7.50
2126	Blue	7.50
2127	Amber	7.50

Mogul Aluminum Model

Recommended for cars having windshields extra wide up to 46 inches.

No.	Color	Each
2231	Green	10.00
2232	Blue	10.00
2233	Amber	10.00

Standard Black Model

Recommended for cars having windshields not exceeding 42 inches wide.

No.	Color	Each
2405	Green	7.50
2406	Blue	7.50
2407	Amber	7.50

Mogul Black Model

Recommended for cars with extra wide windshields up to 46 inches.

No.	Color	Each
2415	Green	9.00
2416	Blue	9.00
2417	Amber	9.00

Sunbeam Visors

The Sunbeam Visor will afford immediate and total relief from eye strain in driving against glaring lights and the sun. It is made of finest steel and malleable, practically unbreakable, black japanned to match the finish of the windshield assembly. Furnished in three colors as listed below. The glass is ¼ inch thick, ribbed on the underside, diffusing the lights. Cuts off the glare, but does not darken the car.

Sunbeam Junior: Furnished in Thoma Process Green, Amber and Cobalt Blue Ribbed Glass. Frame drawn from steel tubing—finished in black enamel. Frame and Brackets packed separately; frame in individual fibre board cases; brackets in shelf hardware boxes. Weight, including boxing and crate, 20 lbs. Fits all cars where distance from center to center of windshield posts does not exceed 41¼ inches. Give name and model of car when ordering.

Frame only. . . . . Each, 6.00
Brackets only. . . . . Each, 4.00
Complete Assembly. . . . . Each, 10.00

Sunbeam Visor "G": Furnished in Thoma Process Green, Amber and Cobalt Blue Ribbed Glass. Frame drawn from steel tubing—finished in black enamel. Frame and Brackets packed separate; frame in individual wood boxes; brackets in shelf hardware boxes. Weight, including boxing, 23 lbs. Fits all cars where windshield posts center to center measure wider than 41¼ inches.

Frame only. . . . . Each, 10.00
Brackets only. . . . . Each, 4.00
Complete Assembly. . . . . Each, 14.00

Hamilton Vision Shields

Adjustable to any angle.

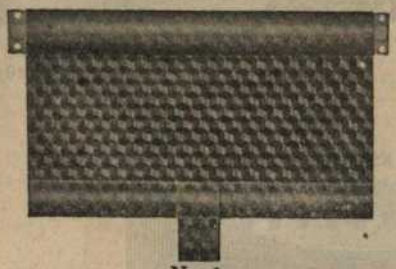
Easy to put on and do not interfere with lowering the automobile top. Can be rolled up under top of car or down to any position. The shield cover can be extended 14 inches. The shield locks rigid in any position, no buckling in wind, no rattle.

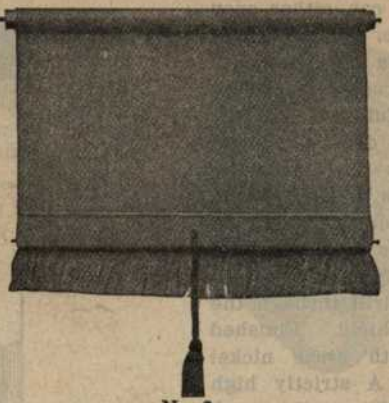
No. 400 will fit windshields 39 to 41 inches. No. 420 will fit windshields 41 to 43 inches.

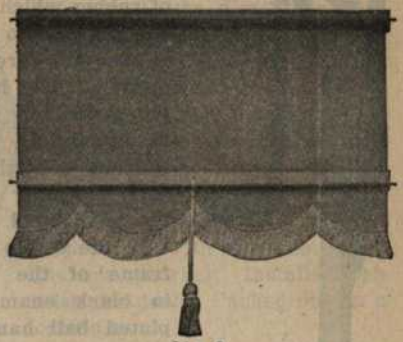
Curtain made of good grade black top covering. Side arms have black Japan finish—are adjustable in length to fit any windshield.

No. 400S—39 to 41 inch. . . . . Each, $7.50
No. 420S—41 to 43 inch. . . . . Each, $7.50

Shades for Closed Cars


No. 1


No. 2


No. 3

Furnished in three styles, each shade being complete with spring roller, guide wires and attaching brackets. We can furnish three different grades of materials.

Royal Fabric is a rubberized high grade fabric, waterproof and embossed to produce a most beautiful finish. Blue, gray or brown colors. Made up only in No. 1 style of shade.

Luxor Cloth is a strong curtain cloth in buff or ecru colors. Made up in either No. 2 or No. 3 styles with fringe and tassels.

Silk Poplin in standard Taupe color is made only in No. 1 style.

Royal Fabric.

Blue, Gray or Brown Colors. No. 1 Style Shade.

	Complete Set 3 Shades	Rear	Rear Side	Door
For Ford coach	10.50	3.80	3.35	3.35
For all other Ford cars	8.75	3.75	2.50	2.50
For all other make cars	10.50	3.80	3.35	3.35

Silk Poplin.

Standard Taupe Color. No. 1 Style Shade.

	Complete Set 3 Shades	Rear	Rear Side	Door
For Ford coach	10.50	3.80	3.35	3.35
For all other Ford cars	8.75	3.75	2.50	2.50
For all other make cars	10.50	3.80	3.35	3.35

Luxor Cloth.

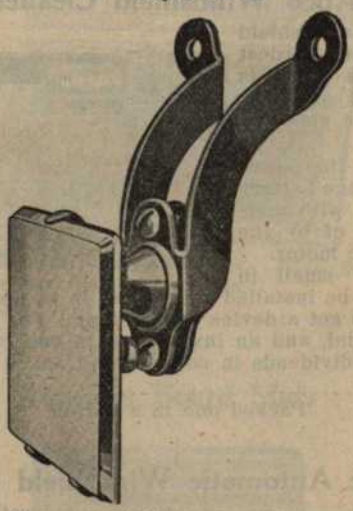
Buff or Ecru Colors. No. 2 or No. 3 Style Shades.

	Complete Set 3 Shades	Rear	Rear Side	Door
For Ford coach	10.00	3.50	3.25	3.25
For all other Ford cars	7.50	3.00	2.25	2.25
For all other make cars	10.00	3.50	3.25	3.25

Orders must specify name, model and year of car, location of shade, grade of material, color, and if Luxor cloth state whether No. 2 or No. 3 style shade is wanted.

Trico Ball Joint Mirrors

Style No. 2

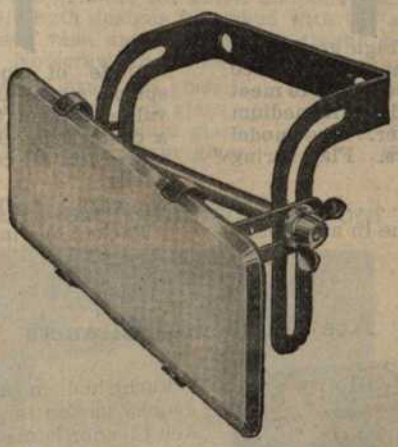


This mirror has a variable drop of 2 inches. It is particularly suited for closed cars having rear windows lower than windshield top, such as Ford, Dodge, Studebaker, Chevrolet. Fitted with fine polished mirror plate, waterproof backing. Bracket finished in black enamel, brass ball. An extra attachment is included with each mirror by which it can be used on open cars.

No. 26893—With glass 2½x7 inches.....Each, 1.75
No. 26894—With glass 2½x9 inches.....Each, 2.00
Packed one in a box.

Universal Crown Mirrors

Style No. 30.



This bracket has been designed to meet all styles of car construction and to provide in one model a mirror that may be used at various angles and at varying heights. It is also distinctive in being the only mirror on the market that will give the user the advantage of his glass when the windshield is opened or closed, where installation is made to the windshield frame direct as in open cars. The bracket is slideably arranged on the support stand, enabling in and out movement of the glass as well as angular adjustment. Controlled with one thumb screw located within easy reach of the driver. Fitted with 2½x7-inch bevel plate. Quick, positive adjustment.

No. 30027—With glass 2½x7 inches.....Each, 2.50
No. 30029—With glass 2½x9 inches.....Each, 2.75
Packed one in a box.

Trico Crescent Windshield Cleaner

One model fits any car, either open or closed. The cleaner has two strips of rubber which cleans and dries with one stroke. So constructed that there is even pressure the full length of the cleaner. The handle does not touch the glass, but allows the cleaner to fit up snugly to the frame at the top out of sight. For use on open cars it simply clamps to the top of the windshield. For closed cars discard the clamp and drill through the frame of the windshield. Finished in black enamel with brass nickel plated ball handle. A strictly high grade article.

On orders for 1 dozen Trico Cleaners we furnish an attractive display box which also includes an extra Trico Cleaner.

No. 3841.....Each, 2.00

Packed one in a carton, 12 in a box.

Trico No. 3 Windshield Cleaner

Of same high grade construction as other Trico cleaners. Designed to meet the demand for a medium price cleaner. One model fits all cars. Flat spring tension.

No. 3.....Each, 1.50

Packed one in a carton.

Trico Buck Windshield Cleaner

Made of good quality spring steel—an excellent value to meet the call for a cheap type cleaner. One model fits all cars. Works easily.

No. 4672.....Each, 1.00

Packed one in a carton.

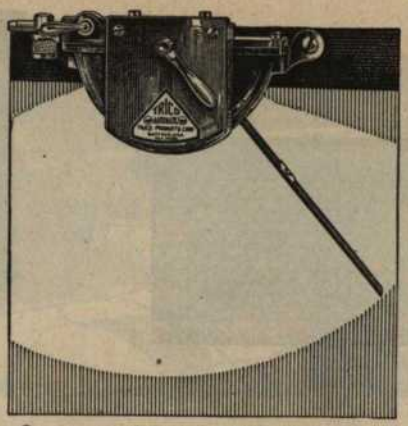
Ace Windshield Cleaners

Furnished in a handsome display carton in colors. The Ace Cleaner is made of aluminum polished. Has two wiping members, one with two strips of high grade rubber, the other a wide felt wiper. Rides between the upper and lower half of any two-piece windshield. Not over the top. Fits windshields with overlapping glass or with weather strip. Packed 10 in display carton.

No. 611—Ace Windshield Cleaners, ...Each, 1.00

Packed one in a carton, 10 in display box.

Trico Automatic Windshield Cleaner



Guaranteed for the life of the car

This cleaner is operated by the suction of the motor through a small rubber tube. Power is applied to the cleaner by means of a piston which moves on the same arc as the cleaner itself. The design of the motor is simple, consisting of only three parts.

The control of air is regulated automatically by two air tight needle valves. In designing this motor simplicity was taken as the first requisite. The production of a design which would not require any mechanical attention whatsoever was first and always considered. Tests covering a period of many months have proven it to be one of the most successful devices ever attached to a motor car.

The speed of the cleaner is regulated from the small shut-off which is made a part of the motor itself.

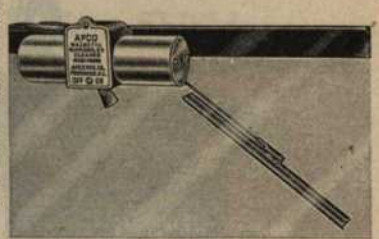
Attachment is made by drilling the frame of the windshield, and requires no extraordinary mechanical skill. There is nothing to adjust. No oiling is required. Ample length connecting hose makes the cleaner standard for every make of gasoline motor driven car.

Furnished in two models. The Universal has an oxidized copper finish and the De Luxe model has a fine black enamel finish.

No. 863—Universal Model. .....Each, 5.00
No. 731—De Luxe Model.....Each, 7.50
Extra Wiper Rods. . .....Each, .20
Extra Rubber Bars. . .....Each, .30

Packed one in a carton.

Apco Windshield Cleaner



Keeps the windshield clean in the hardest storm, as its speed is constant and does not vary with the speed of the motor.

It derives its power from the storage battery and operates with magnets instead of by the usual electric motor.

It is very small in size and can be installed easily, and is as near quiet as it is possible to get a device of this kind. For dependability it has no equal, and an investment in one of these items will pay big dividends in comfort and added safety.

No. 20. . . . .Each 5.00

Packed one in a carton.

Electric Automatic Windshield Cleaner

Operates from the storage battery and uses a minimum of current. Entirely automatic, with uniform speed regardless of the speed of the car. Can be operated by hand if desired. Nicely finished and neat in appearance.

No. 1036.....Each, 10.00

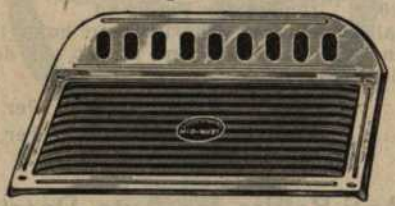
Packed one in a carton.

Cocoa Mats

Furnished complete with attachments ready to slip on and off instantly. Clamps to running board.

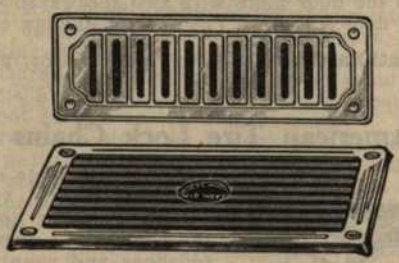
8x14 inches. . . . . Each, $1.40
10x14 inches . . . . . Each, $2.00

Step Plates



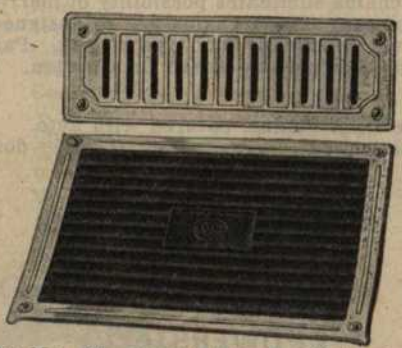
Made with polished pressed aluminum frames and good rubber tread. Size 9¼x11¾ inches.

No. 1. . . . . Each, 1.75



Made of polished pressed aluminum with separate kick plate 4x10¼ inches. Mat is 6⅝x10¼ inches, with rubber tread. Intended for Ford, Chevrolet and other small cars.

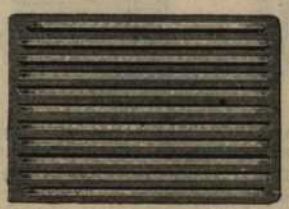
No. 2K, complete. . . . . Each, 1.75



Similar to No. 2K, except larger. Kick plate is 4x12 inches and the mat is 10x12 inches.

No. 3K, complete. . . . . Each, 2.75

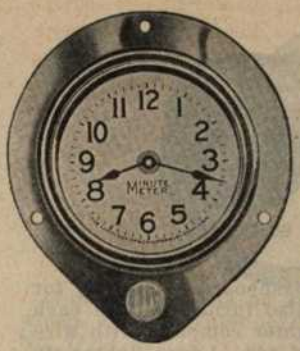
Running Board Mats



Made of good black rubber composition. No. 65 is 8x11½ inches, intended for larger cars, and No. 50 is 7¼x11¼ inches and intended for Ford and other small cars.

No. 65—8 x11½ inches . . . . . Each, .50
No. 50—7¼x11¼ inches . . . . . Each, .45

Minute Meter



At a glance Minute Meter gives the correct time. Until now automobile clocks have been rather expensive and the winding and setting inconvenient.

Minute Meter has not only overcome these disadvantages—but it is one of the very few that can be regulated without dismantling from the dash, and is provided with an effective vibration absorber. Installs flush with the dash. Packed one in a carton.

No. 1—Minute Meter with regular dial. . . . . Each, 2.50
No. 2—Minute Meter with Radium treated etched metal dial with extra large hands. . . . . Each, 3.50

Flower Vases

No. 106-108

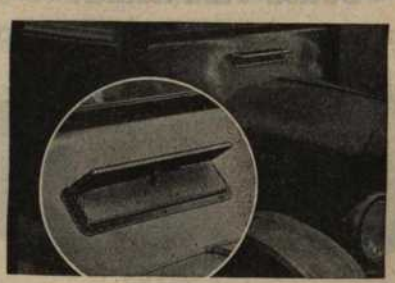
No. 206-208

Distinct individuality is embodied in the graceful hexagonal design. Observe these two important points of construction, the prominent non-splash effect at top of the vase and the anti-rattle feature at the tip of the bracket, which holds the vase absolutely rigid over the roughest road.

The No. 106 and No. 108 are plain glass. The No. 206 and No. 208 are genuine cut glass, diamond hand cut (not acid etched). Both designs furnished with the spring clip, which releases vase automatically by thumb pressure on bracket tip. No screws to bother. Packed one in a carton.

No. 206—(6-inch size), cut glass. . . . . Each, $3.50
No. 208—(8-inch size), cut glass. . . . . Each, $4.00
No. 106—(6-inch size), plain glass. . . . . Each, $1.90
No. 108—(8-inch size), plain glass. . . . . Each, $2.40

DeLuxe Ventilator for Ford



The DeLuxe Ventilator cools the air under the cowl where it is made hot by the engine.

No other kind of ventilation does this.

It prevents draughts on the front seat passengers and adds greatly to the comfort and pleasure of driving.

The anti-rust screen keeps out bugs, bees, road gnats and flies.

A chart is furnished with each ventilator showing the exact position of ventilator and where to cut cowl. A special installation tool is furnished free with each twelve ventilators. Standard package, twelve to the carton.

(A counter card, instruction chart, installation tool and a quantity of folders are packed in each carton.)

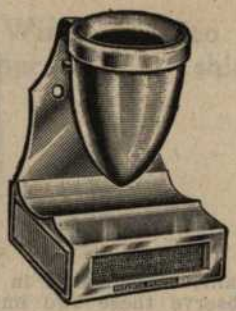
No. 887. . . . . Each, 1.75

Premier Cigar Lighter

Can be attached to any style dashboard. A clamp for attaching to steering column is also furnished with each lighter. Easy to attach. Each lighter complete with wire for attaching to lighting circuit of car. Large lighter tip takes the blunt end cigar and lights it evenly.

No. 80815—For 6-8 volt current.....Each, 5.00
No. 80817—For 12-16 volt current.....Each, 5.00
Renewable Tips, 6-8 volt.....Each, .50
Renewable Tips, 12-16 volt.....Each, .50

No. 100 Ash Receiver

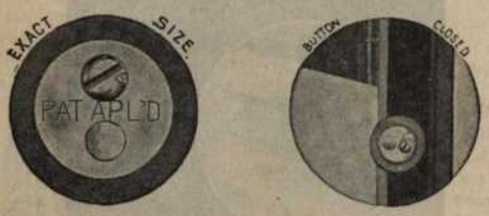


Combination Ash Receiver, Matchbox Holder and Cigar Rest for enclosed car use—a smoker's necessity from the standpoint of convenience and safety. A highly desirable portable feature is obtained through the use of two slender fastening pins attached to the back of the bracket. These pins hook into but do not harm the upholstery, permitting the receiver being instantly placed for use from any seat in the car. For permanent attachment, screws are furnished. Solid brass construction throughout, handsomely nickel plated. Ash cup is detachable for cleaning purposes—very sanitary. Packed one in a carton.

No. 100—Ash Receiver.....Each, $2.10

Button Anti-Rattlers

FOR CLOSED CAR AND HOUSE WINDOWS

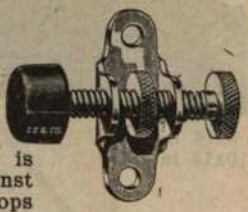


A very simple device that stops the rattle of windows in closed cars or houses. It consists of a circular rubber with a nickel plated steel disc on each side, securely riveted together. A hole is drilled a little to one side of center, through which it is screwed to the window frame, or moulding. The screw being out of center it acts as an eccentric. When in use it is turned with the long side against the window and the rubber prevents rattle. When the window is to be lowered simply turn the long side away from the window, and it can then be moved. Easy to use and nothing to get out of order. Put up 36 on a very attractive display card, complete with screws, washers and full instructions.

Button Anti-Rattlers.....Per dozen, $2.70

Anti-Rattlers for Closed Car Windows

No. 420



No. 421

The rubber is screwed up against the window and stops the rattle and vibration. No. 420 is intended for Ford and No. 421 for all other cars. The lock nut holds it firmly to position. Finely nickel plated and put up one dozen on an attractive display card.

No. 420.....Per doz., $3.60
No. 421.....Per doz., $3.36

Anti-Rattler for Auto Doors

Fastens to the door jamb with two screws and stops the rattle of the door. 2 dozen (12 pr.) on display card.

No. 2412—Anti-Rattlers for Auto Doors...Doz. pairs, $3.80

American Tire Lock Chains

These are made of the flat link, American type steel chain. The flat links permit the chain to be drawn closely to shoes and running board; or through a wheel and spring or frame.

Strong, noiseless, easily attached—these chains afford adequate protection against auto or tire thieves. The covering on chains eliminates possibility of marring enamel or varnish of car. These chains are so designed that the owner may use practically any type of lock. Padlocks are not included. Packed one dozen in a carton. Length 36 inches.

No. 62—Tire Lock Chains, covered with auto leather.....Per dozen, $15.80

"Powersteel" Autowlock

Padlock not included

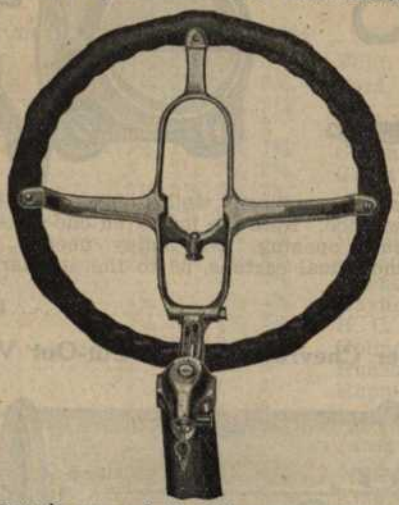
"Powersteel" Autowlock foils car and spare tire thieves, made of four feet of Yellow Strand Wire Rope, wrapped with a strong waterproofed cord fabric. Autowlock is put through the wheel and through a spring, and a padlock snaps through two heavy spliced-in eyes. Takes up no room; weighs less than a pound. Perfect protection against thievery. Reduces insurance. Can also be used as an emergency chain to secure traction.

"Powersteel" Autowlock.....Each, $4.00

For Padlocks, see Index.

"Lokwel" Tilting and Locking Steering Wheel

Approved by Underwriters' Laboratories



Convenience is one of the big outstanding features of this wheel. Its tilting angle affords the greatest amount of room for entering or leaving driver's seat. As an approved locking device, the Lokwel meets all the requirements of insurance companies and at the same time gives the motorists a positive, handy locking mechanism which is as efficient as any on the market today.

A high grade tumbler lock is conveniently placed at top of steering post. Use of key is only necessary in unlocking. The center head is made of case-hardened steel and is carefully machined. A deep key-way insures positive and durable steering leverage while the wheel is unlocked and when lock is snapped into place the Lokwel cannot again be engaged with post until key is inserted and mechanism unlocked.

The wheel is of standard 17-inch diameter. Rims furnished in either Walnut or Black Composition. The spider is cast of aluminum in one piece and is highly burnished on both sides. Packed one in a carton.

Car	Rim	Horn Button	Each
Ford	Walnut	Yes	15.00
Ford	Composition	Yes	15.00
Ford	Walnut	No	14.00
Ford	Composition	No	14.00
Chevrolet	Walnut	Yes	15.00
Chevrolet	Composition	Yes	15.00
Star	Walnut	Yes	15.00
Overland 4	Walnut	Yes	15.00
Gray	Walnut	Yes	15.00
Maxwell	Walnut	Yes	15.00
Dodge	Walnut	Yes	15.00

Rid-Ged Grip—Steering Wheel Tire

A positive easy grip. Hands or gloves will not slip. Warmer in winter, cooler in summer. Prevents driving callous. Easily applied. Made of good Para gum to insure long life and elasticity. Made in two sizes. Weight 12 ozs. Packed 10 in a carton. Black color only.

No. 1718—For 17 and 18-inch Wheels, including Ford Lock Wheel . . . . . Each, 1.75

No. 1924—Medium size for the standard size Ford Wheel . . . . . Each, 1.75

Plain Steering Wheels for Ford

17-inch rim. Fits on steering post in place of regular wheel, giving greater leverage.

No. 17 . . . . . Each, $3.50

Perry Lock for Ford

Approved by Underwriters' Laboratories

This Ford Lock can be used with the regular Ford Wheel and can be very easily installed. It has a solid aluminum casting cap and is equipped with a Yale or Corbin Cabinet Lock.

To lock, the wheel is raised and by turning the lock a steel crescent is brought in place under the gears at the lower end of the pinion to prevent them from coming into mesh with the gears in the housing. When driving this crescent is thrown back over the gears to prevent them from coming out of mesh. Packed one in a box.

No. 5 . . . . . Each, 7.00

Wire Cable

Finest quality flexible galvanized cable for use in connection with horn valves, muffler cut-outs, brakes, etc.

No.	Size, ins.	Per ft.
1	1/8	$0.08
2	5/32	$0.10
3	1/4	$0.12

Cut-Out Cable Chain

For connection to foot pedal; will last three times as long as wire cable; will run through an ordinary pulley easily.

No. 9 . . . . . Per foot, $0.08

Cut-Out Cable Pulleys

Electro Galvanized—¾-inch Sheaves for 5/32-inch Chain or Cable.

No. 111 . . . . . Per doz., $1.00

Cut-Out Spring

5½ inches long.

No. 63 . . . . . Per doz., $1.00

Cooper Special Cut-Out

An especially designed gray iron valve with adjustable lever, of sturdy construction throughout, that meets the demand for a medium priced, high grade and efficient cut-out. Releases back pressure on motor, causes loud explosion and simplifies locating weak clyinder, missing spark plug, knock in motor, etc. Heavy steel flapper opens a 3-inch exhaust area and closes tight against an accurately machined seat. Easily installed without cutting the exhaust pipe in two. Made in all sizes and packed in individual cartons, complete with cable, pulley and pedal, unless otherwise ordered, 10 to the container. Be sure to give size when ordering.

Size	Valve Only	Complete with Pedal Pulley and Cable	Complete with Dash Control
1½-inch	2.50	3.00	5.00
1⅝, 1¾, 1⅞-inch	3.00	3.50	5.50
2, 2⅛-inch	3.50	4.00	6.00
2¼, 2⅜, 2½, 2⅝-inch	4.00	4.50	6.50
2¾, 2⅞, 3-inch	5.00	5.50	7.50

Cooper Special Ford Cut-Out Outfits

Consists of a 1½-inch Cooper Special Outfit and a No. 92 Cooper Dash Control.

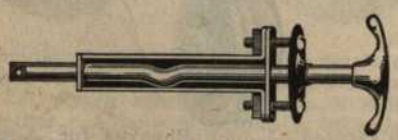
Cooper Special Ford Outfits.....Each, 3.75

Cooper Dash Control

The No. 91 Cooper Dash Control is made of solid brass and steel, well finished in bright polished nickel. Ornamental, handy and serviceable. Adapted for use with all cut-outs, as well as exhaust heaters and air choke valves, radiator shutters and cowl ventilators. Locked in any position by a slight turn to the right. Installed with a single ½-inch hole in the dash. In individual cartons, 20 to the container, complete with copper tubing and wire for attaching.

No. 91—Cooper Dash Control.....Each, 2.50

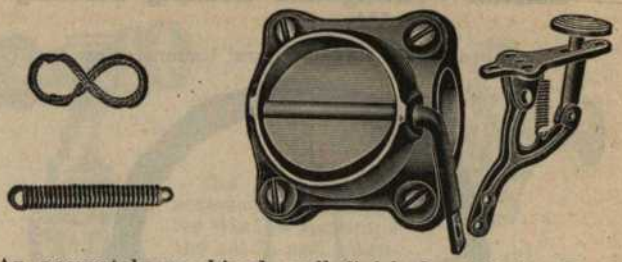
Cooper Jr. Dash Control



A new improved control designed especially for the Ford car. Similar to No. 91 control but not as nicely finished and considerably cheaper. Has durable, simple, patented locking device, and a half turn locks it in any position. Positive in action, dependable, locks tightly and releases instantly. Black enamel dash plate with polished nickel hand grip. Furnished complete with copper tubing and wire for attaching, in individual cartons.

No. 92. . . ..Each, 1.25

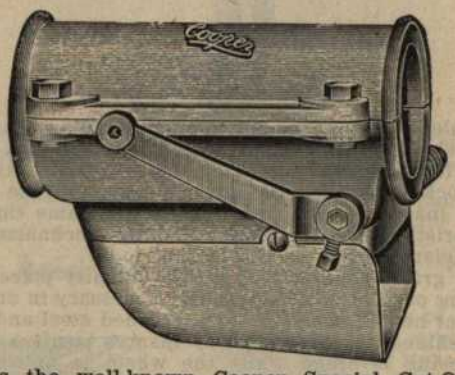
Cooper Standard Ford Cut-Out Outfits



An accurately machined, well finished outfit for Ford cars at a low price. Note the improved one-piece lever and 2-inch exhaust opening. No pulley needed to attach. Packed in individual cartons, 30 to the standard shipping package.

No. 533. . . ..Each, $1.40

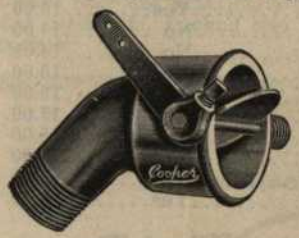
Cooper Chevrolet Special Cut-Out Valve



This is the well-known Cooper Special Cut-Out with special attachment for use with late model Chevrolets. Installation is the same, except that valve is placed on the slanting part of exhaust pipe. Attachment prevents exhaust firing into splash pan.

Valve only. . . ..Each, 3.50
Complete with Pedal, Pulley and Cable.....Each, 4.00
Complete with Dash Control.....Each, 6.00

Cooper Screw Type Cut-Out for Buick



Malleable iron valve with high tension spring and adjustable lever. Designed for the Buick car only. Installed by replacing standard clean-out plug just ahead of the muffler with this valve. Packed in individual cartons, complete with pedal, pulley and cable unless otherwise ordered. In individual cartons, 10 to the container.

Valve only. . . ..Each, 3.00
Complete with Pedal, Pulley and Cable.....Each, 3.50
Complete with Dash Control.....Each, 5.50

Cut-Out Pedals

This is a very serviceable malleable pedal of the spring acting type. Has positive lock for holding cut-out open. Strong spring.

No. 3. .....Each, .75

Very easy to install. Simply drill a ⅝ inch hole through floor board, slip shank of the pedal through and draw up one nut. Positive and easily operated locking device.

No. 4. .....Each, 1.00

Cut-Out Sizes

The following list gives authoritative information as to size of exhaust pipes on automobiles of practically every make. This list has been compiled from authentic sources, and can be taken as a reliable guide in purchasing the Cooper "Special" Muffler Cut-Out, which is made for all cars.

Make of Car	Year 1919-20	'21	'22	'23-'24
Ambassador	2½	2½	2½	2½
American Six	2¼	2¼	2¼	2¼
Anderson 40	2¼	2¼	2¼	2¼
Anderson 41	..	...	...	2
Apperson	1¾	1¾	1¾	1¾
Auburn 6	2	2¼	2¼	2¼
Beggs	2¼	2¼	2¼	2¼
Buick	1¾	1¾	1¾	1¾*
Cadillac	1¾	1¾	1¾	1¾
Case V and X	2¼	2¼	2¼	2¼
Case W	..	...	...	2½
Chalmers	2⅜	2⅜	2⅜	2⅜
Champion	2½	2½	2½	2½
Chandler	2	2	2	2¼
Chevrolet	2	2	2	2
Cleveland	2	2	2	2
Climber	2	2	2	2
Cole	2⅝	2⅝	2⅝	2⅝
Columbia 7-W	2	...	...	...
Columbia 7-R	2¼	2¼	2¼	2¼
Columbia 6-Y	..	...	2	2
Comet	2½	2½	2½	2½
Crow-Elkhart	2¼	2¼	2¼	2½
Cunningham	2¼	2¼	2¼	2¼
Daniels	1⅞	1⅞	1⅞	1⅞
Davis 50 and 60	2¼	2¼	2¼	2¼
Davis 70	..	...	2	2
Dixie Flier	2⅜	2⅜	2⅜	2⅜
Dodge	2	2	2	2
Dorris	2½	2½	2½	2½
Dort 4	2¼	2¼	2¼	2¼
Dort 6	..	...	...	2
Duesenberg	..	...	2⅜	2⅜
Dupont	..	2½	2½	2½
Durant 4	..	1¾	1¾	1¾
Durant 6	..	...	2¼	2¼
Earl	..	...	1¾	1¾
Elcar	2¼	2¼	2¼	2¼
Elgin	2	2	2	2
Essex	2	2	2	1¾

*1924 Model uses 2 inch.

Make of Car	Year 1919-20	'21	'22	'23-'24
Flint	..	...	...	2¼
Ford	1½	1½	1½	1½
Fox	2¾	2¾	2¾	2¾
Franklin	1½	1½	1½	1½
Gardner	2¼	2¼	2¼	2¼
Grant (Falls)	1¾	1¾	1¾	1¾
Grant (Walker)	2	2	2	2
Gray	..	...	1¾	1¾
Handley-Knight	2½	2½	2½	...
Hanson	2¼	2¼	2¼	2¼
Haynes 47 and 57	2⅜	2⅜	2⅜	2⅜
Haynes 77	2½	2½	2½	2½
H. C. S. 4	..	2¼	2¼	2¼
Holmes	2	2	2	2
Hudson	2¼	2¼	2¼	2¼
Hupmobile	1¾	1¾	1¾	1¾
Jackson	2¼	2¼	2¼	2¼
Jewett	..	...	2	2
Jordan	2¼	2¼	2¼	2¼
King	2 1/16	2 1/16	2 1/16	2 1/16
Kissel	2¾	2¾	2¾	2¾
Kline	2¼	2¼	2¼	2¼
LaFayette	1¾	1¾	1¾	1¾
Lexington	2	2	2	2
Liberty	2	2	2	2
Lincoln	..	2½	2½	2½
Locomobile	2¾	2¾	2¾	2¾
Marmon	3	3	3	2½
Maxwell	1⅝	1⅝	1⅝	1⅝
McFarlan	3¼	3	3	3
Mercer 4	3	3	3	...
Mercer 6	..	...	...	2¼
Mitchell F-40, 42, 45	2½	2½	...	...
Mitchell F-50	..	...	2⅝	2⅝
Monroe	..	1¾	1¾	1¾
Moon 6-48 and 6-58	2¼	2¼	2¼	2¼
Moon 6-40	..	...	...	2
Nash	2	2	2	2
National Sextet	2½	2½	2½	2½

Make of Car	Year 1919-20	'21	'22	'23-'24
Oakland	2¼	2¼	2¼	2¼
Oldsmobile 8	1¾	1¾	1¾	1¾
Oldsmobile 4	2	2	2	2
Overland	2	2	2	2
Packard	2¼	2¼	2¼	2¼
Paige 6-66 and 70	2½	2½	2½	2½
Paige 6-42 and 44	2	2	2	2
Peerless 66	1⅞	1⅞	1⅞	1⅞
Pierce Arrow	2⅞	2⅞	2⅞	2⅞
Pilot	2¼	2¼	2¼	2¼
Premier	2¼	2	2	2
Premocar	2	2	2	2
R. & V. Knight	2½	2½	2½	2½
Reo	2¼	2¼	2¼	2¼†
Rickenbacker	..	...	2¼	2¼
Roamer (Duesenberg)	2½	2½	2½	2½
Roamer (Continental)	2¼	2¼	2¼	2¼
Rolls-Royce	3	3	3	3
Sayers	2¼	2¼	2¼	2¼
Standard	1⅝	1⅝	1⅝	1⅝
Star	..	...	1¾	1¾
Stearns 4	2¼	2¼	2¼	2¼
Stearns 6	..	...	...	2½
Stephens	2¼	2¼	2¼	2¼
Stevens-Duryea	2½	2½	2½	2½
Studebaker Big 6	2	2	2	2
Studebaker Light 6	2	1¾	1¾	1¾*
Studebaker Special 6 (Order Cutout with Lever on Opposite Side for Special Six.)	2	2	2	2
Stutz	3	3	3	3
Templar	2	2	2	2
Tulsa	..	2⅜	2	2
Velie 34 and 58	2	2	2	2
Velie 48	2¼	2¼	...	...
Westcott	2¼	2¼	2¼	2¼
Willis St. Claire	1⅞	1⅞	1⅞	1⅞*
Willys-Knight	2½	2½	2½	...
Winton	2½	2½	2½	2½

*1924 Model uses 2 inch.
†1924 Model uses 2½ inch.

Veeder Hub Odometer

Form K for All Cars

Makes a truck a responsible worker—answerable to its owner for every item on its expense account. Reports mileage delivered per gallon of gasoline, per pint of oil, per battery-renewal, per tire-life, per dollar of repair cost.

Records of mileage, checked against costs, show the per-mile operating expense for each truck—what it is and what it ought to be. They check reckless or extravagant driving; they reveal every instance where fuel or supplies are squandered.

The Veeder's strength for service lies in its rugged and solid mechanism. This recording mechanism takes the shocks, gives the service. Registers mileage so it's always readable; always totaled up whether truck runs forward or backward. When ordering, state the make, model, year of manufacture of car, and size of front wheel.

No. 928AC—All Car Model.....Each, 20.00

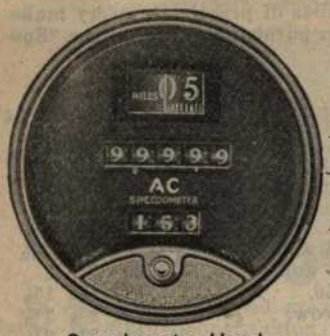
Veeder Hub Odometer

Ford Model

The Veeder Hub Odometer enables the Ford truck owner to get maximum mileage for every operating and maintenance item. Records the distance traveled on a given amount of gasoline, giving a standard for gasoline economy. Allows checking up of fuel, oil and battery costs—the wear of guaranteed parts and accessories—the efficiency of the driver. The Veeder Ford Model Odometer has the same rugged mechanism as the regular Veeder for big heavy trucks with solid rubber tires; this mechanism is equal to unlimited service on the light-running, pneumatic-tired Ford. Seals on to front hub, and always registers forward, whether truck runs forward or backward. When ordering give model, year of manufacture of car, and size of front wheel.

No. 929FM—Ford Model.....Each, 15.00

A. C. Speedometer for Ford Cars



Speedometer Head

Wheel Gear

The A. C. Speedometer is an accurate, steady instrument for recording mileage and speed. It is of the magnetic type, fully jeweled, absolutely noiseless and unusually attractive in appearance. Its finished, symmetrical design reflects refinement in every detail. Made by the makers of A. C. Spark Plugs, it is a quality product.

Indicates 0 to 75 miles per hour; registers a total of 100,000 miles and 100-mile trip, registering tenths and resetable.

Face black, with white figures, rim of solid brass, nickeled. Instrument completely sealed against water, dust, moisture or tampering, and has a glass front.

The Crown Road Wheel Gear is easily attached to the wheel. No holes to drill. All that is necessary is to unscrew three alternating flange nuts and substitute bolts supplied with the Crown gear.

The flexible shaft is a high-grade multiple cross wound wire cable, the same as used in dental machinery and in high-priced speedometers, taxi-meters, etc.

No swivel joint used, as flexible shaft will turn at a smaller radius, eliminating the need for a swivel joint. The pinion meshes sidewise, preventing bottoming of teeth, as the Crown gear is set away from hub flange by three spacers, preventing jamming of mud, ice, snow, etc., the cause of most pinion trouble. Packed one outfit complete with all necessary parts for attaching, one in a box.

A. C. Speedometer for Ford.....Each, 15.00

Imperial Auto Priming Device

The Imperial Primer is a simple, easily-installed plunger pump outfit that throws a fine spray of vaporized, fireable gasoline into the manifold, thus enabling the engine to be started on the first turnover, no matter how cold the weather.

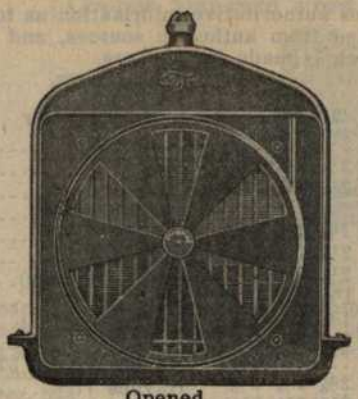
Furnished in two styles which will fit any make of car. No. 58D is for all makes except Ford. The outfit includes a Primer pump, tubing, manifold spray fittings and all necessary couplings for attaching. On some cars it is necessary to drill and tap small holes in the manifold for inserting the manifold sprayer fittings.

The small cost of this device is quickly saved by preventing loss of time, needless exhaustion of storage batteries, manipulations of priming cups, etc.

Packed in a handsome display carton, containing two Ford and two Standard Primer Outfits, which will help you double your sales on this popular device. Weight of carton, 5¾ lbs.

No. 59D—For Ford.....Each, 4.00
No. 58D—For Standard cars.....Each, 4.75

Radiator Shutters for Ford


Opened

Closed

The Common Sense (adjustable) Radiator Shutter is not an experiment. It is a patented device that has been extensively used and in all cases has given satisfaction. It is economical and efficient and is made to fit all makes of cars.

Has a metal plate, with adjustable openings controlled from the dash of the car, that bolts right on to the honeycomb part of the radiator. It affords as perfect radiator protection as can be obtained in cold weather, and in mild weather it can be so adjusted as to eliminate all of the unsatisfactory features of the hood and radiator covers.

This Radiator Shutter eliminates all the work and worry of attempting to protect your radiator from freezing. A thumb screw on the dash of your car permits you to give your radiator the correct amount of air at all times without ever leaving your seat.

It is easily installed or removed and will last for years, as there is nothing to wear out.

No. 937CS—1923 and previous.....Each, 4.75
No. 938CS—1924.....Each, 5.00

Universal Radiator Shutters

Maintains correct temperature when driving. Opens and closes from driver's seat. Can open gradually for correct operating of engine. Will save gasoline, increase power, prevent freezing and reduce ignition troubles. Installation is simple; and anyone can attach.

In ordering give make, model and year of car, for which they are intended.

For Ford and other small cars.....Each, 10.00
For Dodge, Buick and larger cars.....Each, 12.00

Utility (Universal) Heaters

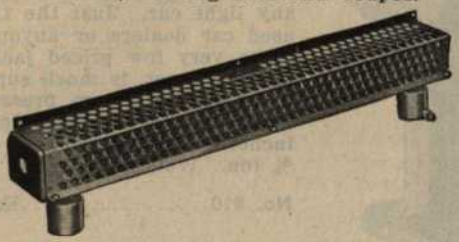
Register Type
Sets flush with floor.

These heaters connect to the exhaust pipe by a control valve which forces a part or all of the hot exhaust through a flexible steel tube to the heater and thus heating the car. The valve is so arranged that it is practically universal and will fit any exhaust pipe from 1¾ to 2¼ inch. A special valve is furnished for Ford. They heat quickly, are noiseless and odorless. Very finely finished. Each heater includes the control valve, tubing and all necessary parts for attaching. Packed complete one in a box.

Utility Type "B" Register Heater—17⅝ inches long by 6¾ inches wide. Bright aluminum finish..Each, 20.00
For Limousines, Sedans, Touring Cars and Taxis.

Utility Type "CC" Register Heater—13⅞ inches long by 6¾ inches wide. Nickel plated finish.....Each, 13.50
For Coupes and Touring Cars.

Utility Type "CF" Register Heater—13⅞ inches long by 6¾ inches wide. Nickel Plated finish....Each, 12.50
For Ford Sedans, Touring Cars and Coupes.



Heelboard Type

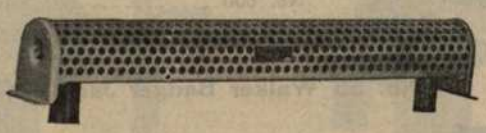
Installed above floor close to seat, out of the way.

Of same high grade workmanship and finish as the register type. Furnished as follows:

Utility Type "O" Heelboard Heater—24½ inches long by 3 inches wide. Black enamel finish...Each, 15.00
For front or back of driver's seat in Sedans, Limousines and Touring Cars.

Utility Type "P" Heelboard Heater—16 inches long by 3 inches wide. Black enamel finish.....Each, 12.50
For Coupes or Roadsters.

Utility Type "PF" Heelboard Heater—16 inches long by 3 inches wide. Black enamel finish.....Each, 10.00
For all Ford Cars.



De Luxe Foot Rail Type

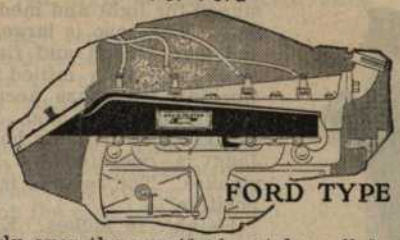
Of same high grade workmanship and finish as the Register and Heelboard Type, furnished as follows:

De Luxe Type "R" Foot Rail Heater—27 inches long by 3½ inches wide. Nickel Plated finish. ...Each, 15.00
For Sedans, Limousines and Touring Cars.

De Luxe Pony Type "S" Foot Rail Heater, 16½ inches long by 3½ inches wide. Nickel Plated finish.Each, 12.50
For Coupes and Roadsters.

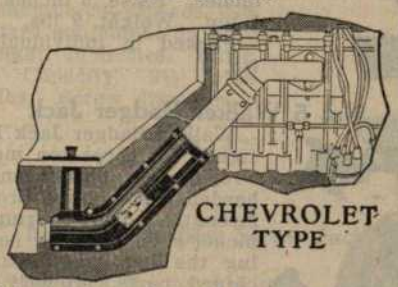
De Luxe Ford Type "SF" Foot Rail Heater, 16½ inches long by 3½ inches wide. Black Enamel finish.....Each, 10.00
For Ford cars only.

Arvin Heater
For Ford



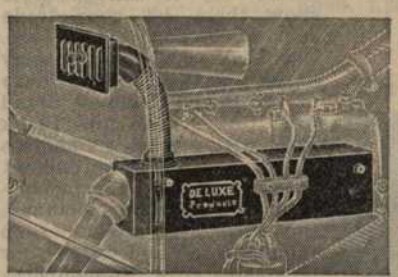
Fits snugly over the manifold, catches all fresh warmed air and whisks it straight back into the car. Just a few revolutions of the motor will start the warmth flowing. An inexpensive heater for Ford open or closed car. For summer driving damper can be closed, stopping the heat entirely, or those who prefer can detach the manifold jacket, as the Arvin is of two-part construction. The register is a permanent, attractive part of the foot-board. Installation is simple. The improved Arvin Heater will fit the late steel dash type Ford models as well as all former models without cutting the dash or deflector plate in any instance. There is no upkeep—the first low cost is the last expense. No mechanical adjustments to make. Packed one in a carton, 25 in a case. Weight each, 1½ lbs.
No. 1968F—For Ford.....Each, 1.75

Arvin Heater
For Chevrolet



On cold, bleak winter days, in frosty fall or rainy spring, the Arvin DeLuxe Heater will give complete comfort in a Chevrolet open or closed car. Installation through the floor-board. Can be removed in summer by detaching the manifold jacket or close the damper, stopping the heat entirely. Packed one in a carton, 12 in a case. Weight each, 3 lbs.
No. 1971C—For Chevrolet 1923 (illustrated).....Each, 3.00
No. 1972C—For Chevrolet 1924.....Each, 5.00

Arvin Heater
For Dodge



Installed in same manner as for Ford, except that register is through the dash-board. Can be detached in summer or damper closed, stopping the heat entirely. Full instructions with each Heater. Greatly adds to the comfort of winter driving, making possible 365 days of comfortable, enjoyable driving. Absolutely no after cost, trouble or upkeep. Packed one in a carton, 6 in a case. Weight each, 4 lbs.
No. 1969D—For Dodge.....Each, 5.00

Arvin Heater
For Maxwell

Practically the same installation as the Dodge Heater, register being through the dash-board. After the Arvin Heater DeLuxe for Maxwell is installed, a warm and comfortable car can be had by merely pushing a button on the dash-board. Full directions with each Heater. Packed one in a carton, 6 in a case. Weight each, 3 lbs.
No. 1970M—For Maxwell.....Each, 5.00

No. 1 Walker Badger Jack

Walker Badger Jack No. 1 is designed for light and medium weight cars. The base is large, the standard well ribbed and fitted with a steel rack with milled teeth. All working parts are accurately machined and assembled. The double cap gives two lifting heights. The Jack is operated by short easy strokes. The reverse is simple and positive.

Height, 10 inches. Ext. cap, 1½ inches. Raise, 5 inches. Capacity, ¾ ton. Weight, 7 lbs.

Packed in individual cartons.

No. 1.....Each, 3.50

No. 3 Walker Badger Jack

Walker Badger Jack No. 3 is a powerful and dependable one ton Jack. Heavy pawls, operated by great handle leverage, raise the load on the steel rack with ease and precision and automatically lock and prevent dropping the load. All the working parts are oversize and built to stand up. Double cap provides two lifting heights.

Height, 10 inches. Ext. Cap, 1½ inches. Raise, 6 inches. Capacity, 1 ton. Weight, 9 lbs.

Packed in individual cartons.

No. 3.....Each, 4.50

No. 5 Walker Badger Jack

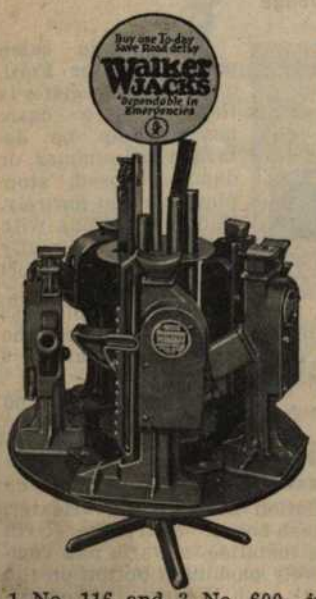
Walker Badger Jack No. 5 is designed for three ton motor trucks. Drop-forged pawls and a case-hardened steel rack provide ample strength. The bearing pins are nickel steel on close centers, making the lift easy. Carefully machined parts, properly assembled, insure positive dependable action. The double cap gives two lifting heights.

Height, 10 inches. Ext. Cap, 1½ inches. Raise, 6 inches. Capacity, 3 tons. Weight, 15½ lbs.

Packed in cartons—17-inch handle separate.

No. 5.....Each, 8.25

Walker Counter Display



The way to sell jacks is show them—let your trade see what good jacks are. The Walker Counter Display shows five Walker Blue Jacks on a Black Enamel Stand with the Orange and Black Sign will attract immediate attention. It's an ornament for your store. The assortment will fill every demand. Buy this assortment — keep the stand full and watch your jack sales grow. Remember—a lot of cars are running with no jack—a lot of them need a better jack. Give them a chance to buy.

Shows every jack on the table. It turns sales and profits. Each jack is securely fastened to the stand and a holder is provided for the handles.

The Display is free with ten fast selling Walker Jacks—2 each Nos. 1, 3 and 310, 1 No. 116 and 3 No. 600—just the ones that your trade wants.

Walker Counter Display Assortment.....Each, $32.10

No. 116 Walker Badger Jack

The adaptability of this Jack is one hundred per cent. Parts inside and out the best—both in material and workmanship. It can be placed with the greatest ease under any part of front or rear axle—pumped up and down and withdrawn with a 36-inch handle. Will handle cars with balloon tires up to 6-20.

Height 11 inches. Height Ft., 4½ inches to 10½ inches. Raise, 6 inches. Capacity, 1 ton. Weight 15 lbs.

Packed in individual cartons, 35-inch handle separate.

No. 116.....Each, 6.00

No. 610 Walker Steel Jack

Walker Jack No. 610 is a pressed steel jack similar to No. 600 except lighter. Will handle any light car. Just the thing for used car dealers or anyone desiring a very low priced jack. This jack, however, is much superior to many of the cheap pressed steel jacks on the market. Height 9¼ inches. Raise 5¾ inches. Capacity ¾ ton. Weight 3½ lbs.

No. 610.....Each, 1.25

No. 600 Walker Steel Jack

Walker Jack No. 600 is pressed steel with malleable lifting pawls and cap. The rack is steel with milled teeth. The special bridge type construction of the standard gives an absolute rigid frame. The base is heavy with turned edges which prevent it from bending in service. The 15-inch handle and positive raising and lowering mechanism makes for simple, easy operation.

Height, 10 inches. Raise, 6 inches. Capacity, 1 ton. Weight, 5 lbs.

No. 600.....Each, 1.60

No. 55 Walker Badger Jack

The Walker Badger Jack No. 55 is designed for heavy motor trucks. The rack bar and lifting pawls are case-hardened drop forgings. The bearing pins are nickel steel. The forged foot lift enlarges the range. The broad base, 36-inch handle and massive structure of this Jack makes it indispensable in roadside emergencies.

Height, 14½ inches. Height Foot, 2 inches-8¼ inches. Raise, 6¼ inches. Capacity, 5 tons. Weight, 32 lbs.

No. 55.....Each, 17.50

No. 475 Walker Badger Jack

The Walker Badger Jack No. 475 will lift the heaviest motor trucks. The leverage, compounded through gears, enables one man to lift the capacity of the Jack with the 18-inch handle. Heat treated high carbon steel pinions, gears, pawls and rack insure maximum strength. The broad base forms the necessary foundation for a heavy lift.

Height, 13 inches. Raise, 7 inches. Capacity, 7½ tons. Weight, 33 lbs.

No. 475.....Each, $23.25

No. 310 Walker Victor Jack

Walker Victor Jack No. 310 is a substantial malleable tool—the base is heavy and the standard carries extra heavy ribbing. The lifting pawls are stocky and mounted on large diameter pins. The spring acton is quick and snappy, the stroke short and easy. A strong lifting foot is cast on the rack. The lifting speed is rapid and sure. Height, 10 inches. Height of foot, 7 inches. Raise, 6 inches. Capacity, 1 ton. Weight 6 lbs. Packed in individual cartons.

No. 310.....Each, 2.65

No. 500 Walker Screw Jack

The Walker No. 500 Jack has turning type handle, with extra flip cap, giving two heights. It can be placed, operated up or down and withdrawn by the handle. The gear ratio gives exceptionally easy lift. The handle is one piece folding type. The standard and gears are malleable iron—screw high carbon steel. Steel ball race eliminates friction. Height, 9 inches. Ext. cap, 1½ inches. Raise, 5 inches. Cap, 1 ton. Weight, 9 lbs. Screw diameter, ⅞ inch.

Packed in cartons. 30-inch handle separate.

No. 500.....Each, 4.25

No. 216 Walker Screw Jack

Walker Screw Jack No. 216 is designed for speed wagons and one ton trucks. All wearing surfaces are machined to gauge. The one to one gear ratio, combined with the 15-inch handle, gives an extremely easy lift. All parts are malleable iron, except the screw, which is steel with machine cut threads. No. 216 is standard equipment on Ford trucks. Height, 10 inches. Raise, 6 inches. Capacity, 2½ tons. Weight, 8 lbs. Screw diameter, 1 inch.

No. 216.....Each, 3.25

No. 200 Walker Screw Jack

Walker Screw Jack No. 200 has the very best grade malleable iron in the standard, bevel gears and handle. The screw is cold rolled steel with die cut thread. The range and capacity of this Jack is designed for light passenger cars—the reverse latch is easily changed for the up or down movement of the screw. This Jack is well finished in black enamel. Height, 9½ inches. Raise, 6 inches. Capacity, ¾ ton. Weight, 3¾ lbs. Screw diameter, $\frac{11}{16}$ inch.

No. 200.....Each, 1.30

Rees Jacks

No. 1C

No. 3A

These jacks have the double worm drive principle which is very efficient and eliminates all end thrust, unnecessary friction and unequal strains.

No. 1C is 10 inches high with 6-inch lift. Capacity 2 tons. Folding cap gives 1 inch extra height. Has long folding handle. Weight 13 lbs.

No. 3A is 12¼ inches high with 6-inch lift. Capacity 6 tons. Ratchet handle. Weight 27 lbs.

A very attractive display stand furnished free on an order for 6 or more Rees Jacks.

6 in a package.

No. 1C.....Each, 8.50

No. 3A.....Each, 16.50

No. 266 Walker Screw Jack

Walker Screw Jack No. 266 is designed to lift the heaviest trucks. Strength dominates every part. Many trucks have different height axles. The double height cap meets this condition. The gear ratio and handle length enables one man to easily lift the capacity of the Jack. Every part is carefully machined and properly fitted, assuring the very highest efficiency. Height, 10 inches. Ext. Cap, 3 inches. Raise, 6 inches. Capacity, 6 tons. Weight, 20 lbs. Screw diameter, 1½ inches.

No. 266.....Each, 8.75

Milwaukee Grip Racks

A permanent addition to any car—in demand all the year. More than a luggage carrier—not just a detachable accessory.

Very neat and inconspicuous when closed—firm, trim and roomy when open for use. Almost invisible at the edge of the running board, but smoothly snaps open for work when there is luggage to carry.

Every car needs a Grip Rack—winter and summer—for trips to and from railroad station, for business or shopping, for carrying most anything, any time, anywhere.

All steel—height when opened 12 inches—when closed 1 inch square. Finish, black enamel (2 coats baked on). Easily attached in a few minutes. Bolts with lock washers are furnished. Slots provided for straps. Each Grip Rack packed in individual carton. For display see below.

Made in three sizes, to fit any car.

No. "A"—44 inches long, for running boards of Ford, Chevrolet, Star size or longer..... 5.00

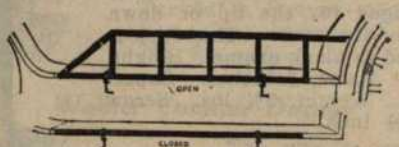
No. "B"—56 inches long, for running boards of Buick, Dodge, Nash, Studebaker size or longer..... 6.00

No. "C"—69 inches long, for running boards of Cadillac, Marmon size or longer..... 7.00

Milwaukee Grip Rack Display Stand

A finely finished all steel stand with running board top. Furnished free with an order for 11 Grip Racks.

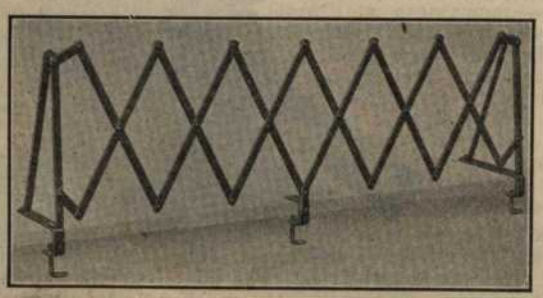
"Handypack" Luggage Carrier



Always on the car. Easy to open as needed or push down out of the way, almost out of sight when not in use. Locks into position either open or closed. Quickly attached, no holes to drill. No bolts or nuts to fasten. Baked black enamel finish. 45 ins. long. No castings used in its construction, only strong, heavy steel throughout.

No. 36363.....Each, **$2.00**

Special Luggage Carriers



Adjusts to fit the size of the load and keeps it compact. Extends from 7½ to 60 inches. Bars are steel. Attaches to running board with three strong clamps. Folds into a small package when not in use. Finished in black enamel. Packed 10 in a crate.

Special Luggage Carriers.....Each, **$2.60**

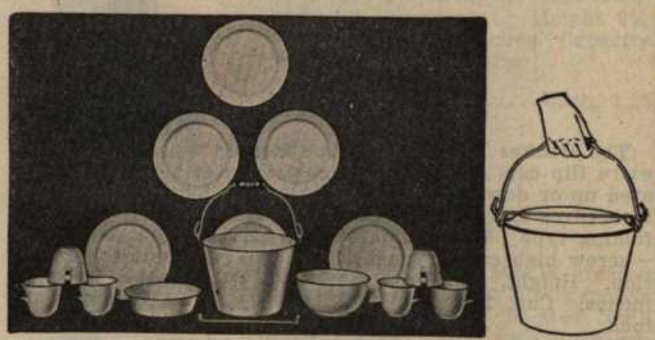
Boyco Service Units

These units are for the purpose of carrying emergency supplies of gasoline, oil and water. The frame holding the cans is neat but substantial, and is securely attached to the running board by two clamps. A channel bar over the top of the cans holds the cans firmly in place and prevents rattle. A flexible tube funnel is furnished with each outfit.

1 can holds 2 gallons of gasoline, another 2 gallons of water, and the other 1 gallon of oil. Each outfit complete in a shipping carton.

No. 221.....Each, **$14.00**

Daisy Auto Lunch Kits



A very complete and compact auto lunch set. Contains 6 8-inch dinner plates, 6 8-pt. flaring cups, 1 6¾-inch salad bowl, 1 6¾-inch vegetable dish, and 1 4-qt. pail. Each piece is triple coated white enameled ware, first quality carefully selected. Durable and sanitary. An ideal kit for tourists, campers or motor boat owners. All articles fit snugly inside the pail and held securely by a special locking arrangement. Each outfit packed in individual shipping carton measuring 10x10x9½ inches. Weight 8 lbs.

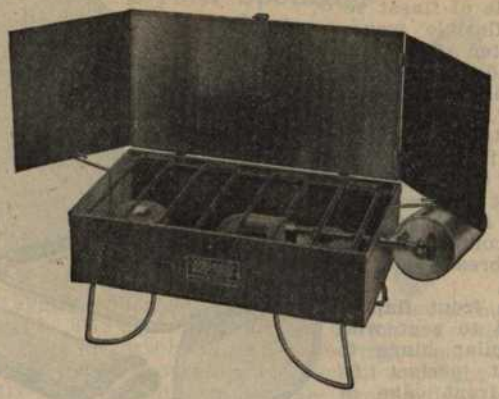
No. 1.....Each, 6.00

Auto Siphon

A convenient device for draining gasoline from the automobile supply tank. Enables the motor tourist to secure gasoline from a passing car in an emergency. Fine for filling Kampkooks, gasoline lanterns, etc. Rubber tube is inserted in tank or vessel from which gasoline is to be drawn. The Siphon pump is held in one hand and the spout grasped with the other hand, one finger being held over end of spout, as shown, to shut off the air. When spout is pulled out gasoline begins to flow. Made of brass, nickel plated and polished and comes with a thirty inch gasoline hose. Each Siphon packed in carton, twelve cartons per box.

Auto Siphon.....Each, 1.00

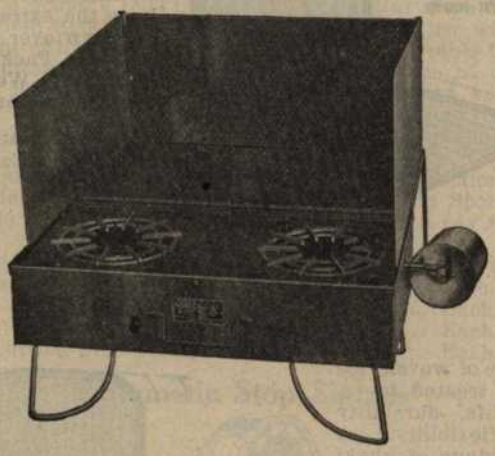
Kampkook No. 3



Kampkook No. 3 has greater capacity in less space than any other camp stove and is used by more campers than all other camp stoves combined. Burns common motor gasoline (or distillate) without smoke, soot or odor. Burner construction produces a well spread even cooking fire superior to a standard gas stove burner. Flame regulated to any size desired. Has unbreakable steel grate hinged to case, hinged cover with adjustable folding wind shield and permanently attached folding steel legs capable of supporting a weight of several hundred pounds. Tank is removable for convenience in filling and requires no funnel. Master burner produces gas for second burner. Burners cannot clog. Tank holds one quart, three hours' supply. All parts, including tank, pack inside case when not in use. Black enamel finish. Size folded, 3½x8x14½ inches. Weight 8 lbs. Each stove packed in individual carton with pump, wrench and directions, ten cartons in crate. Shipping weight, each 9½ lbs.; per crate of 10, 100 lbs.

No. 3.....Each 7.50

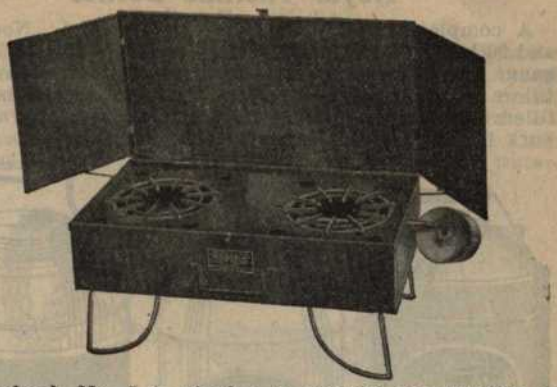
Kampkook No. 4



Kampkook No. 4 is similar in general construction to the No. 3 except in size. Has 10½x19½ inch steel top with seven inch grates, folding wind shield which folds flat inside cover. Cover hinged to case fitted with supports makes a fine warming shelf. Permanently attached folding steel legs, capable of supporting a weight of several hundred pounds, are concealed in case when not in use. Tank is removable for convenience in filling and requires no funnel; holds two quarts, six hours' supply. All parts, including tank, pack inside case when not in use. Black enamel finish. Height, set up, exclusive of wind shield, 8½ inches. Size folded 4¼x10½x19½ inches, weight 15½ lbs. Packed in individual carton with pump, wrench and directions, ten cartons in crate. Shipping weight each 17 lbs., per crate of 10, 188 lbs.

No. 4.....Each, 11.00

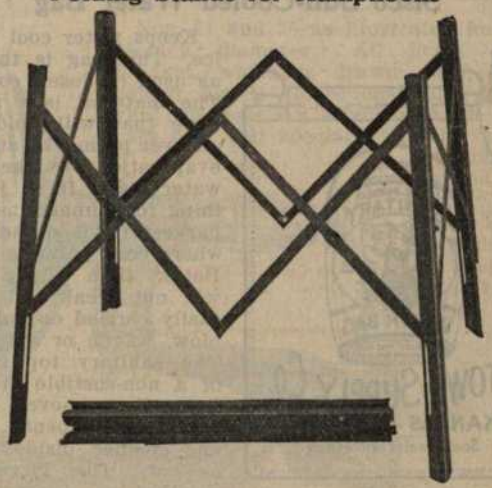
Kampkook No. 7



Kampkook No. 7 is similar in general construction to No. 3. It has 10½x19½ inch steel top with seven inch grates. Cover hinged to case with adjustable folding wind shield. Permanently attached folding steel legs, capable of supporting a weight of several hundred pounds, are concealed in case when not in use. Tank is removable for convenience in filling and requires no funnel; holds three pints of fuel, 4½ hours' supply. All parts, including tank, pack inside case when not in use. Height, exclusive of wind shield, 8½ inches. Black enamel finish. Size folded 4¼x10½x19½ inches, weight 14½ pounds. Packed in individual carton with pump, wrench and directions, ten cartons in crate. Shipping weight each, 15 lbs., per crate of 10, 163 lbs.

No. 7.....Each, 9.00

Folding Stands for Kampkooks



This folding Kampkook stand greatly increases the convenience and comfort of cooking on American Kampkook. Brings the cooking surface of the Kampkook to a convenient height of 27 inches. Substantially built of steel, securely riveted with sliding joints, in one piece; no loose or separate parts. Holds stove securely, stands firmly and will support a weight of more than 200 pounds. Dull nickel finish. Folds to 1½x2½x18¾ inches and packs inside Kampkook case when not in use. No. 40, for Kampkooks Nos. 4 and 7, weighs 3 lbs., packed in carton for shipment 3½ lbs.

No. 40—Stand.....Each, 2.25

Automobile Shovels

Detachable Handle

Made to fit in tool box or under seat.

Length, set up, 29 ins.; length, detached, 16 ins.; width of blade, 6 ins.; length of blade, 9 ins.

No. 10.....Each, $4.00

Royal Thermic Bottles

A complete line to answer every demand. Nos. 8, 10 and 20 have metal jackets, nicely enameled. No. 25 has 20 gauge polished aluminum jacket. Nos. 8 and 10 have glass fillers easily replaceable. Nos. 20 and 25 have bristolware fillers which are guaranteed against breakage. Granulated cork insulation. All caps are polished aluminum.

No. 8	Nos. 10 and 20	No. 25
2¼-inch mouth.	3-inch mouth.	3½-inch mouth.
1 gallon capacity.	1 gallon capacity.	1 gallon capacity.

No. 8—Gray enameled, weight 8 lbs.....Each, 2.75
No. 10—Gray enameled, weight 8 lbs.....Each, 3.75
No. 20—Blue enameled, weight 10 lbs.....Each, 4.00
No. 20—Ivory enameled, weight 10 lbs.....Each, 4.00
No. 25—Polished aluminum, weight 10 lbs.....Each, 6.00
Packed one in a shipping carton.

Sisco Sun-Cooled Water Bag

Keeps water cool without ice. This bag is the same as used in desert countries. The material is a peculiar fibre that will hold water and yet permit of sufficient evaporation to keep the water cool. It is just the thing for summer motoring, harvest fields or any place where cool water is needed. Better than a jug for it will not break and can be easily carried on cultivator, plow, wagon or automobile. The sanitary top is made of a non-rustible metal. It is easily removed so the bag can be opened, turned and cleaned inside as well as out. Has large metal mouthpiece.

1-gallon size, weight per dozen, 8 lbs.....Per doz., $18.20
2-gallon size, weight per dozen, 12 lbs.....Per doz., $24.00
5-gallon size, weight per dozen, 20 lbs.....Per doz., $44.80

Kool Kooshion

Very durable attractive in appearance and adds greatly to the comforts of summer motoring, picnicking, etc. Approximately one inch thick, reversible, flexible and highly porous. Allows free air circulation to the seat and back which comes in contact with the cushion. The main body of the Kool Kooshion is an 80-ft. coil spring, spirally wound, giving cushioning effect, maintaining air space and acting as separating means for coverings. Entire construction is sewed through and through with special machine, making compact, durable auxiliary cushion. Packed 10 in a carton. Weight per carton 23 lbs.
Kool Kooshions.....Each, 3.00

De Luxe Seat Pads

Made of finest select flexible woven imported rice straw, treated to retain life, durability and flexibility. A wide hinge of strong khaki cloth is used to join back and seat, allowing perfect fit into seat cushion and contours, without breaking the straw.

The front flap is joined to seat with a similar hinge to permit perfect fit over front edge of cushion, and is self-adjusting to all sizes seat cushions in all automobiles.

Entire reverse side is lined with strong durable khaki cloth, which prevents scratching or chafing of fine upholstery and highly polished surfaces; also prevents straw from spreading open.

Back is 18½ inches high, 18½ inches wide. Seat is 18½ x18½ inches square. Front flap over cushion riser is 7½ inches wide, 18½ inches long.

All edges are bound with non-fading, pre-shrunk material, reinforced with leatherette and a patented method of making edging inseparable from pad. Furnished in mixed colors, non-fading.

Packed 10 in a carton. Weight 16 lbs. per carton.
De Luxe Seat Pads.....Each, 2.00

Standard Seat Pads

Made of same material and of same general construction as De Luxe, but does not have the extra fold to go down over edge of cushion. Packed 10 in a carton. Weight 13 lbs. per cartons.

Standard Seat Pads.....Each, 1.50

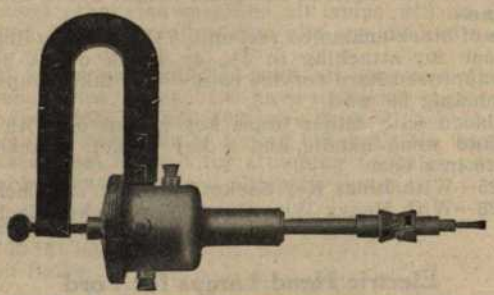
Handy Seat Pads

Made of woven rice straw treated to retain life, durability and flexibility. A wide hinge of khaki cloth is used to join the two pieces. Edges are bound with strong, non-fading, pre-shrunk material reinforced by patented method of making edging inseparable from pad. Each piece is 17x17 inches. Can be used either side. Not lined. Packed 10 in a carton. Weight 10 lbs. per carton.

Handy Seat Pads. . .Each, 1.00

Clymer Spotlights

The Clymer Windshield Spotlight is installed through the windshield. The control handle and switch are within five inches of the driver's hand on the steering wheel—INSIDE THE CAR. This beautiful and efficient spotlight can be instantly converted into a portable trouble light without use of wrench or pliers. This light swings on a ball joint. The pistol-grip handle is weighted to exactly balance the light. Its rays can be instantly directed at any angle where its position is firmly held by a spring with constant tension. Largely made from aluminum it weighs only 1¾ pounds. Its universal bracket fits all cars and it cannot rattle or jar loose.



This Portable Cutter shown above, with the Clymer Cutting compound, cuts the hole in two minutes without removing the windshield glass and without danger of cracking the glass or marring it in any way. Complete installation which requires only twenty minutes, is so simple an operation that any man in the dealer's shop can do it.

With a dealer's INITIAL order for eight or more Clymer Windshield Spotlights, we will ship him together with his shipment of lights, one Clymer Windshield Portable Cutter. This Cutter will be furnished the dealer free of charge for his use just as long as he is pushing and handling Clymer Lights. The Cutter remains the property of the Clymer Mfg. Co. and is loaned to the dealer on the above basis.

We can also sell one of these Cutters at a nominal cost to the dealer who prefers to buy less than eight Spotlights. The sale of only two Spotlights will more than pay for the Cutter.

Packed one Spotlight complete in a carton, 12 in a shipping case. Complete instructions furnished with each outfit.

Clymer Spotlights. . . . . Each, 12.75
Clymer Glass Cutter. . . . . Each, 5.25
Extra Cutting Sleeve only for Glass Cutter. . . . . Each, 1.50

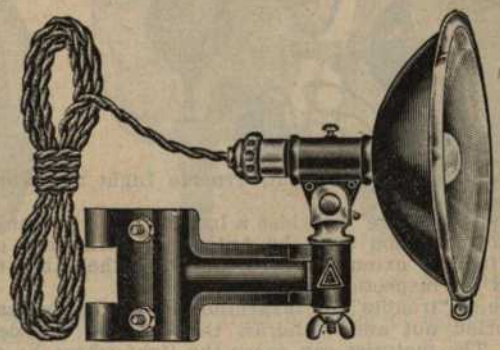
Automatic Stop Signals

This device is connected to the brake pedal so that every time the brake is applied it shows the word "Stop" in brilliant red. It immediately demands attention from the driver behind either at night or in the daytime. The lamp has a silvered reflector and the 4¼-inch lens has many prisms which serve to throw a very strong light. The switch is positive and always works. The lamp case is black enameled and is fitted with an attaching bracket that can be used on a fender or almost any other position on the car. Packed 1 in a box complete with switch and the necessary cable, clamps and screws for installing.

Automatic Stop Signal. . . . . Each, $3.30

Delta Spotlights

The heads of all Delta Spotlights are quickly detachable for trouble uses. Head, switch, focusing mechanism and other parts are of brass. All screws and bolts are brass, making it impossible for them to rust. Bulbs, Mazda 6-8 volt double contact, 21 C. P. tipless. Hand-Buffed Lens Retainer Rings are so designed as to make the light waterproof.



No. 20. 5½-inch diameter. Brass head. No more efficient reflector ever made; approved by U. S. Navy and over 40,000 furnished them.

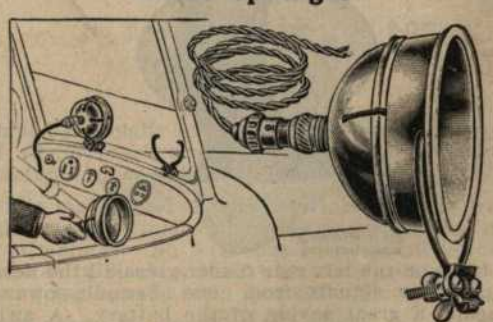
Shell is black enameled with nickel trimmings. Very heavy and strong bracket, which will fit practically any windshield. If wanted for closed cars specify a No. 21 enclosed car attachment. Packed in individual cartons, 12 to a shipping case.

No. 20—Black and Nickel. . . . . Each, 4.25
No. 21—Closed Car Attachment. . . . . Each, .25

Nos. 24 and 25 as illustrated here are 4⅝inch diameter. All brass except bracket, which is drawn steel, but is copper plated before enameling to prevent rusting. An attachment for closed cars and also special Chevrolet bracket attachments packed free with each lamp. Packed in individual cartons, 12 to a shipping case.

No. 24—Black and nickel. . . . . Each, 3.00
No. 25—All nickel. . . . . Each, 4.00

Inside Spotlight



Attached to inside of windshield. No drilling of glass necessary.

This Spotlight has a wide range of light and is close at hand and easily controlled. Bulb Sockets can be moved forward and backward to keep Bulb in proper focus. Easy to insert new Bulb. Complete instructions with each Lamp. Packed in individual carton, 12 to shipping case.

No. 65. . . . . Each, 6.50

C6 Auto Reelite Spotlight

A 3-in-1 Light—Spot Light, Trouble Light and Portable Light.

The "Auto Reelite" provides a lamp of superior construction in combination with the Automatic Cord Reel, carrying 12 feet of extension cord, allowing the lamp to be removed for inspection to any part of car.

To use as "trouble" or "inspection light," simply unscrew the knurled nut and withdraw the lamp to the desired length. The motorist can carry the light where he needs it.

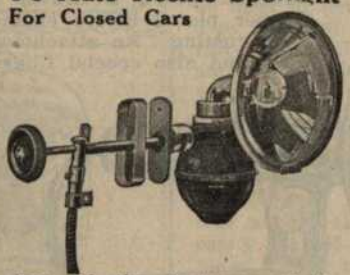
Lamp and bracket is finished in black enamel, nickel trim, fitted with concave lens, backed by a Mazda C (nitrogen) lamp in a silvered parabolic reflector that increases the light and directs the rays. Switch conveniently located at back of lamp.

Universal windshield clamps are included with each lamp to fit practically any car. Brackets for attaching to outside of closed car can be furnished at only a slight extra cost. Packed one in a box.

No. 3280 . . . . . Each, 9.75
Brackets for attaching to closed car . . . . . Each, .25

F6 Auto Reelite Spotlight

For Closed Cars



This light has all the features of the C6, but is equipped for use on sedans, coupes and all closed cars. The bracket is screwed to the frame of the body and the control bar passes through a small hole in the frame. The one control knob adjusts the light to any position, horizontally or vertically. A handy positive switch. Finished in black enamel with nickel trimmings. Packed one in a box.

No. 3580 . . . . . Each, 13.00

Parking Lights

This lamp on the left rear fender gives all the necessary front and rear signals from one 2-candle-power bulb. This means a great saving of the battery. A switch is provided on the lamp for turning light on or off. Equipped with 6 volt 2-candle-power double contact bulb.

The casting underneath has smooth rounded edges eliminating any danger of catching loose tire chains. Also has a rubber washer for protecting the wire. Regularly equipped with a piece of armored cable long enough to make connection outside the fender. A very substantial light. Packed one in a box.

No. 46. . . . . Each, $2.80

"Reelite" Portable Hand Lamps

National Electrical Code Standard

250 Volts 250 Watts

No. 1528

No. 1525

Good local lighting demands light from the proper direction. The Reelite provides the desired flexible industrial lighting unit for use over work-benches, tables or machines. They provide for light at the exact height above the working plane.

Made of black enameled reel-unit, 7¼ inches in diameter, with base for attaching to 3¼ or 4-inch outlet box; 25 feet of approved hard service cord. Will take lamps up to and including 60 watt.

Furnished with either brass key socket or with heavy guard and wood handle and a key socket. Packed one complete in a box.

No. 1525—With Brass Key Socket . . . . . Each 12.50
No. 1528—With Heavy Wire Guard Key Socket. Each 15.00

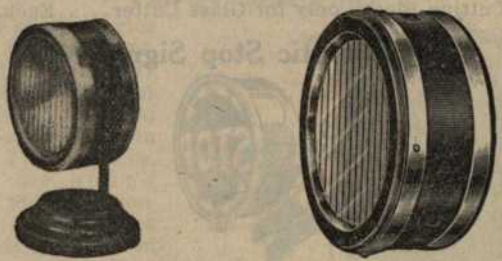
Electric Head Lamps for Ford

Complete with special single bracket support. Body drawn from one piece of steel, protected both inside and outside with two coats of baked-on enamel. Reflector, parabola in form, has cord gasket fastened to rim, insuring aginst rattle or dust. Door has rounded edge and is securely locked in place. Bulb, C Mazda, Double Contact S11, 21 C. P., 6-8 volt.

Outside dia. of door, 9 ins.; inside dia. of door, 7 ins.; dia. of glass, 8⅛ ins.. Shipping weight 9 lbs. Packed one pair in a carton.

No. 325. . . . . Per pair, $ 7.80
No. 325T—Same as No. 325 except is fitted with double filament bulb. . . . . Per pair, $10.40

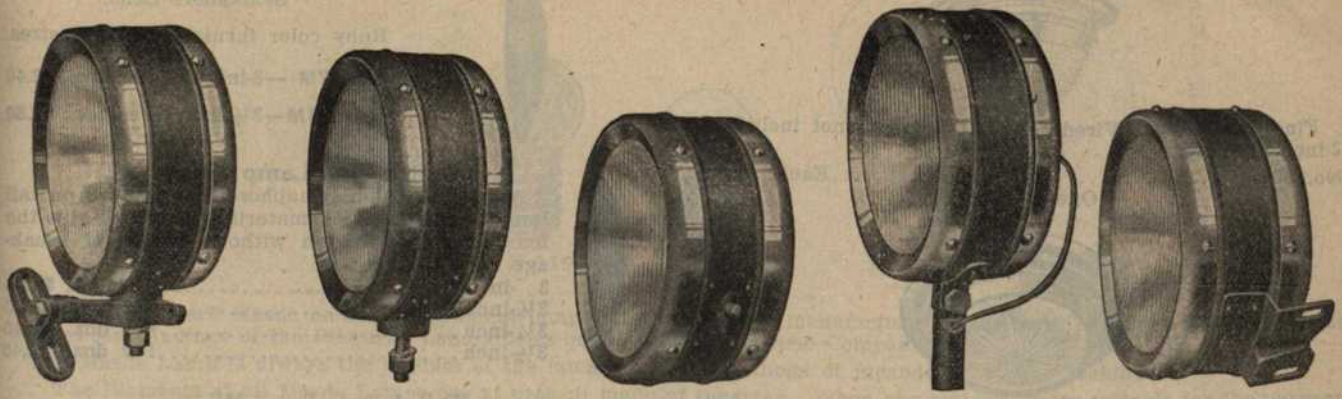
"El Camino" Ford Lamp Drums



An attachment to place over regular Ford Head Lights to give them a Drum Type Head Lamp appearance. Rivals in appearance and quality the high price Drum type lamps on larger cars. Nickel plated, black enamel inlaid doors. Can be assembled right over a Ford Head Lamp with a screwdriver in less than five minutes Absolutely rigid and cannot vibrate or rattle. Rigid drop-forged bracket that allows adjustment out and away from car if desired. An attractive counter display stand is furnished free with an intial order of one case (12 pairs). Packed one pair in a box.

"El Camino" Ford Lamp Drums . . . . . Per pair, 4.95

Drum Head Lamps



Nos. 80-100 Nos. 82-102 Nos. 83-103 Nos. 81-101 No. 104

These popular type Head Lamps are made in two sizes, Nos. 80, 81, 82 and 83 have front diameter of 9 inches, while Models Nos. 100, 101, 102, 103 and 104 have front diameter of 10 inches.

Finished in black enamel, baked on, with nickel trimmings. All plated parts such as bodies, doors, screws, etc., are made from brass, therefore rust proof. All nickel lamps furnished on special order from factory.

Unless otherwise specified all lamps will be equipped with single circuit wiring system, 6-8 volt. Can however be furnished double circuit wiring and any desired voltage on special order. When dimmer bulbs are ordered we can only furnish single circuit.

All lamps are equipped with an approved dimmer lens.

Models Nos. 80 and 100 have universal type for mounting to fenders. Models Nos. 81 and 101 have special hollow stem for Dodge. Nos. 82 and 102 have S. A. E. type mounting for attaching to fenders or cross bars. Nos. 83 and 103 have side lugs for fastening to forked bracket. No. 83 has prop centers of 8 inches. No. 103 prop centers of 8½ inches. No. 104 has special bracket for attaching to Buick cars. Orders must state cars for which lamps are wanted.

Packed one pair in a shipping carton.

Nos. 80-81-82-83. . . . . Per pair 12.00
Nos. 100-101-102-103-104. . . . . Per pair 18.00
Dimmer Bulbs. . . . . Extra per pair 2.00

Drum Side Lamps

Designed to harmonize with Drum type Head Lamps so universally used at this time.

Body is drawn in one piece from suitable gauge metal, all plated parts made from brass, therefore rust proof.

Bulbs are 2 c. p., 6-8 volt single circuit wiring system. Can not be furnished in double contact.

Each lamp is equipped with two angle washers which permit the lamps being installed on a slanting cowl, where cowl is straight omit washers.

Finished in black enamel, baked on, nickel trimmed.

All nickel lamps furnished on special order from factory.

Packed one pair in a box.

No. 18. . . . . Per pair 3.50

Tail Lamps for Ford

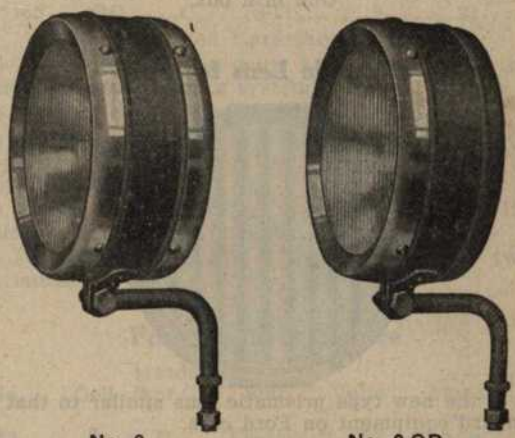
Fastening is a special bolt and nut to permit its being attached to the oil lamp bracket on the Ford cars.

B. Mazda G6 Bulb, 2 C. P., 6-8 volt.

Dia. of front 3¼ inches. dia. of ruby glass 3 inches. Packed one in a box.

No. 49J —Double Contact. . Each, $0.90

Drum Head Lamps for Ford



No. 9 No. 9-OD

Designed especially for use on Ford cars, having special forged single bracket support for attaching to all cars manufactured since 1915.

No. 9 is manufactured with two nickel doors, front and rear, this lamp is finished in black enamel, baked on, with nickel trimmings. No. 9-OD has only one nickel door and is furnished in black enamel with nickel plated door only. All plated parts made from Brass, therefore rust proof.

Unless otherwise specified all lamps will be equipped with double wiring system, 6-8 volt. When dimmer bulbs are supplied the wiring system will be single circuit.

Both models are equipped with an approved dimmer lens.

Packed one pair in a shipping carton.

No. 9. . . . . Per pair 10.00

Dome Lamps

Finely nickeled. Wired complete but bulb not included. 3-inch diameter.

No. 60E.....Each, $3.00

One in a box.

Finely nickeled. Wired complete but bulb not included. Cut star glass. 3-inch diameter.

No. 60-S.....Each, $3.70

One in a box.

A very ornamental light with wall bracket. Size 2¾x2¾ inches. Finely nickled. Wired complete but bulb not included.

No. 56-B.....Each, $4.80

One in a box.

Prismatic Lens for Ford

This is the new type prismatic lens similar to that used as standard equipment on Ford cars.

Prismatic Lens.....Per pair, $0.72

1 pair in a carton.

Head Lamp Lens

Ford Size Only

No.	Size, ins.	Each
8P—Plain.	8⅛	$0.24
8G—Ground.	8⅛	$0.54

We can also furnish other sizes of plain lens on special order from factory.

Tail Lamp Glasses

Semaphore Lens.

Ruby color furnished in two sizes.

No. 27M —3-inch....Per doz., $2.40

No. 271M—3⅛-inch..Per doz., $2.50

Inselite Tail Lamp Lens

A non-breakable semaphore lens for use on tail lamps. Made of light material which will give the maximum illumination without danger of breakage. Ruby color.

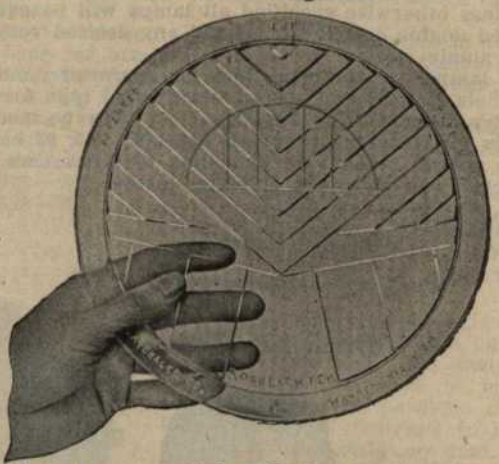
3 -inch.....Per doz., $2.40
3⅛-inch.....Per doz., $2.40
3¼-inch.....Per doz., $2.40
3½-inch.....Per doz., $2.40

Tail Lamp Lens Wires

For holding ruby lens in tail lights.

Tail Lamp Lens Wires.....Each, $0.20

Shaler Roadlighters



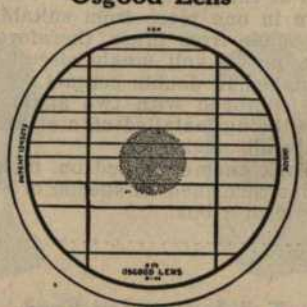
This lens has complied with the requirements of all states having headlight laws.

The Shaler Roadlighter is not a dimmer, but gives better driving light than plain glass or any other lens. The road is smoothly lighted to full width with spotlight intensity. Penetrates fog and dust clouds because the light is held down so there is no back glare.

In ordering, specify make, model and year of car for which the lenses are intended, or give us the size wanted. Each pair carefully packed in a carton to prevent breakage.

8¼-inch and smaller, including Ford size....Per pair, 2.75
8⅜-inch and larger.....Per pair, 3.50

Osgood Lens

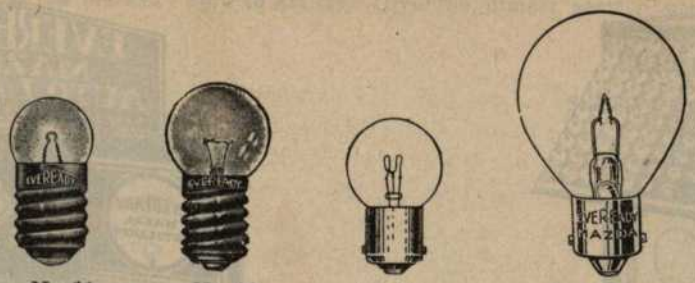


This is a deflecting type lens that will meet the requirements of all anti-glare laws. The prisms are so arranged that all the light is used and concentrated forward and downward onto the road.

In ordering, specify make, model and year of car for which the lenses are intended, or give us the size wanted. Each pair carefully packed in a carton to prevent breakage.

6⅝, 6¾, 6⅞-inch.....Per pair, 2.50
7, 7¼, 7½, 7¾, 8, 8⅛, 8¼, 8½-inch.....Per pair, 3.00
8⅝, 8¾, 9, 9⅛, 9¼, 9½-inch.....Per pair, 3.50
9¾, 10, 10¼, 10½, 10¾, 11-inch.....Per pair, 4.00

Miniature Mazda Lamps



No. 11 No. 16 No. 63 No. 1129

The trade-mark Mazda on an incandescent lamp signifies that the manufacturer of the lamp has the advantage of the most recent findings of the Research Laboratories of the General Electric Company.

A Mazda Lamp is always the product of the latest and best methods of incandescent lamp making.

The filaments of all Mazda Lamps are at present made of tungsten. When any material more suitable for the purpose is discovered or developed, it will be used.

In a Mazda B Lamp the filament operates in a vacuum.

In a Mazda C Lamp the filament operates in an inert gas.

The standardization of Miniature Mazda Lamps has progressed so rapidly that practically the entire demand of the country for automobile lighting service is confined to 11 types of lamps and to 7 types of flashlight and dry cell service.

These lamps are marked * in the list. By limiting their purchases to these types, dealers may be assured of a minimum investment, an adequate stock without danger of obsolescence, faster turnover, and a greater total profit on the Miniature Lamp line. The effort of the manufacturer is constantly devoted to standardization, and from time to time other lamps will be dropped from this list.

For Automobile Service (Except Ford)

No.	Base	Mazda B or C	Bulb	Volts	Candle-power	List Price Each
*61	SC					
62	DC	B	G-6	3-4	2	.20
*63	SC					
*64	DC	B	G-6	6-8	2	.20
*67	SC					
68	DC	B	G-6	12-16	2	.25
71	SC					
72	DC	B	G-6	18-24	2	.30
*81	SC					
82	DC	B	G-8	6-8	4	.25
89	SC					
90	DC	B	G-8	12-16	4	.30
*1129	SC					
*1130	DC	C	S-11	6-8	21	.35
1133	SC					
1134	DC	C	S-11	6-8	32	.55
*1141	SC					
*1142	DC	C	S-11	12-16	21	.40
1143	SC					
1144	DC	C	S-11	12-16	32	.60
1145	SC					
1146	DC	C	S-11	18-24	27	.60

Items marked * are the best sellers.

For Standard Dry Battery Service

No.	Cell	Mazda B or C	Bulb	Volts	Amps.	List Price Each
*19	1	B	G-4½	1.25	0.60	.15
35	2	B	G-5½	2.4	0.80	.15

Items marked * are the best sellers.

All lamps are put up in unit packages of 10.

For Ford Cars

No.	Base	Mazda B or C	Bulb	Volts	Candle-power	List Price Each
*(b) 63	SC	B	G-6	6-8	2	.20
(c) 72	DC	B	G-6	18-24	2	.30
*(b) 1129	SC					
*(d) 1130	DC	C	S-11	6-8	21	.35
(e) 1136	DC	B	S-11	9	18	.35
(e) 1133	DC	C	S-11	9	27	.40
(c) 1146	DC	C	S-11	18-24	27	.60
*(b)					21	
*(f) 1158	DC	C	S-11	6-8	2	.45
*(e) 1160	DC	C	S-11	9	21	.35

Items marked * are the best sellers.

(b) For cars equipped with 3-cell (lead type) storage battery-generator lighting system.

(c) For use on magneto lighting system.

(d) To insure satisfactory service, Mazda 1130 should be operated two in series on magneto lighting system equipped with reactance coil.

(e) To be burned two in series on magneto lighting system not equipped with reactance coil.

(f) For use on Ford and other cars wired for two filament lamps.

For Flashlight Service

No.	Cell	Mazda B or C	Bulb	Volts	Amps.	List Price Each
*1	2	B	FE-3¾	2.2	0.25	.15
2	3	B	FE-3¾	3.3	0.25	.15
*11	2	B	G-3½	2.3	0.27	.15
12	3	B	G-3½	3.3	0.27	.15
*(a) 13	3	B	G-3½	3.8	0.30	.20
*(a) 14	2	B	G-3½	2.5	0.30	.20
*16	2	B	G-4½	2.5	0.30	.15
*17	3	B	G-4½	3.8	0.30	.15
18	3	B	G-4½	4.0	0.30	.15
31	5	B	G-5½	6.2	0.30	.15

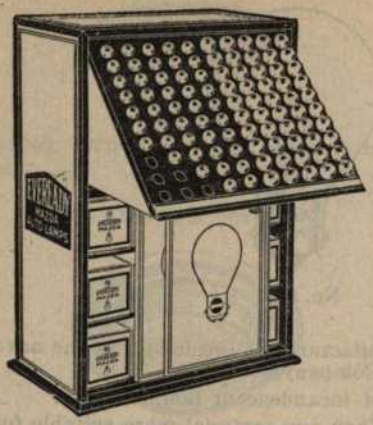
Items marked * are the best sellers.

All Flashlight Lamps listed above are fitted with miniature screw bases.

(a) Concentrated filament for focusing flashlights only.

Write for information on Special Lamp Contracts

Eveready Auto Lamp Display and Stock Cabinet



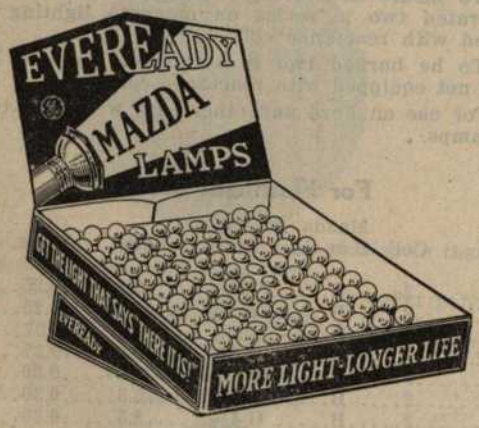
The No. 1723 Eveready Auto Lamp Steel Cabinet is both attractive and practical and has several exclusive features. There are two compartments, upper and lower. The upper tilting compartment stocks and displays in a very unique manner 100 assorted side, rear and instrument lamps. When closed it is flush with the front of the cabinet. The lower compartment, equipped with shelves and sliding doors, conveniently holds 12 unit cartons of assorted headlight lamps.

The drop compartment has a silicate strip on which may be indicated the stock numbers of the different types of lamps. If at any time the dealer wishes to make a change in the arrangement of the types, the silicate markings are easily erased and replaced by new numbers. The slide door arrangement in the lower compartment permits a full view of the cartons of headlight lamps, the labels showing the contents of each box.

The Eveready Cabinet is 23 inches high, 16 inches wide and 9 inches deep, and is easily placed on the counter or on the shelf. The special features allow for flexibility of stock and at the same time remind the dealer of the types that require reordering.

No..1723—Cabinet only, without lamps.....Each, 5.85

Eveready Mazda Flashlight Lamp Assortment



An assortment of 100 Eveready Mazda Flashlight Lamps is packed in this attractively colored cardboard display case. The lamps selected will serve the greatest number of flashlights in popular use.

The flashlight owner usually delays to replace a burned-out lamp. This compact assortment gets the eye and makes the sale.

This assortment contains 20 No. 11, 20 No. 13, 30 No. 16, and 30 No. 17, a total of 100 lamps, having a list value of 16.00.

No. 1923—Eveready Mazda Flashlight Lamp Assortment.....Each, 16.00

Counter Lamp Kit Assortment

This attractive counter display lithographed in colors contains 20 Lamp Kits filled with Eveready Mazda Automobile Lamps.

Each kit contains five lamps, making a total of 100 lamps in the assortment. Ten of the kits contain lamps for Ford cars, each kit having 2 No. 1158 and 3 No. 63.

The remaining ten kits contain a selection of lamps to fit the majority of popular cars and certain Ford cars which are not wired for double filament headlight lamps. This second set of kits is made up of 2 No. 1129 and 3 No 63.

On the back of the container is printed information showing the cars that may be supplied from the assortment.

The total list value of the bulbs in this assortment is 28.00. There is no charge for the kits or display.

No. 0100—Counter Lamp Kit Assortment.....Each, 28.00

Car Owner's Lamp Kits

This is the same folded cardboard box used in the counter lamp kit assortment shown above. They are intended to hold 5 assorted lamps. This enables the dealer to make up assortments to suit the need of any motorist and the kit serves as a substantial carrying case in the tool box.

Car Owners's Lamp Kits.....Per 100, $6.00

Crescent Portable Lamp Guards

A light but strong guard built to withstand hard usage. Made of Bessemer steel rods and stamped metal rings with copper-plated finish. Takes any ⅜-inch standard brass socket, but socket is not included.

No. 4645.....Each, $3.00

"Save" Electric Light Bulbs

One of the best Lamps on the market. Sure to satisfy. Give the utmost service under all conditions. A Quality Incandescent Lamp.

Tungsten Lamps

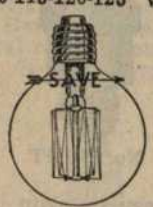
Standard Lighting Service
110-115-120-125 Volt.

Watts	Type and Size Bulb	Standard Package Quantity	Each Clear	Each Frosted
10, 15, 25, 40	S-17	100	.30	.35
50	S-19	100	.30	.35
60	S-21	100	.35	.40

Country Home Plant and Train Lighting
30-34 Volt

Watts	Type and Size Bulb	Standard Package Quantity	Each Clear	Each Frosted
5, 10, 15, 25	S-17	100	.30	.35
40, 50	S-19	100	.30	.35

Round Bulb
Standard and Train Lighting
110-115-120-125 Volt



Watts	Type and Size Bulb	Standard Package Quantity	Each Clear	Each Frosted
15, 25	G-18½	100	.40	.45
25, 40	G-25	50	.50	.55

Nitrogen Lamps

Standard Lighting Service
110-115-120-125 Volt

Watts	Type and Size Bulb	Standard Package Quantity	Each Clear	Each Frosted
50	P. S. 20	50	.45	.50
60	P. S. 22	50	.50	.55
75	P. S. 22	50	.50	.55
100	P. S. 25	24	.60	.65
150	P. S. 25	24	.75	.80
200	P. S. 30	24	1.00	1.10

Country Home Plant and Train Lighting
32-34 Volt

Watts	Type and Size Bulb	Standard Package Quantity	Each Clear	Each Frosted
25	P. S. 20	100	.45	.50
50	P. S. 20	50	.45	.50
75	P. S. 22	50	.55	.60
100	P. S. 25	24	.70	.75

Milite Lamps

(Vacuum)
Standard Lighting Service
110-115-120-125 Volt

Watts	Type and Size Bulb	Standard Package Quantity	Each Clear	Each Frosted
10	S-14	100	.30	.35
25, 50	P-19	100	.33	.38
60	P-19	100	.43	.48

Lamp Guards

Loxon

Fastens to the socket with a key and prevents theft as well as breakage. One key regularly included with every dozen guards. No. 1425 is intended for 25 to 60 watt lamps with standard sockets. No. 1427A is intended for 25 to 60 watt lamps with weatherproof sockets. Packed 1 dozen in a box.

No. 1425. . . . . Per doz., $8.40
No. 1427A. . . . . Per doz., $8.40
Extra Loxon Keys. . . . . Per doz., $2.80

Protector "O"

This guard has an open bottom, enabling quick and easy changing of lamps. No. 1429 is intended for 40 watt lamps with standard sockets. No. 1432 is intended for 40 watt lamps with weatherproof sockets. Packed 1 dozen in a box.

No. 1429. . . . . Per doz., $6.00
No. 1432. . . . . Per doz., $6.00

A C Spark Plugs

AC Spark Plugs
The Standard Quality Plugs of the World

All A C Titan one-piece plugs are now furnished either with plain or ribbed carbon-proof porcelains. The carbon-proof are intended especially for winter use or for all year service on motors that are subject to oil pumping.

Carbon-proof plugs regularly shipped in cold weather months and plain in summer months.

Packed 10 in a box.

AC Spark Plugs
The Standard Quality Plugs of the World

No. 78RT
No. 78RCP

No. 78LT
No. 78LCP

No. 78DT
No. 78DCP

No. SAET
No. SAECP

No. SAELT
No. SAELCP

No. SAEXLT
No. SAEXLCP

No. 78RT	—⅞-inch regular, plain	Each, 1.00
No. 78RCP	—⅞-inch regular, carbon-proof	Each, 1.00
No. 78LT	—⅞-inch long, plain	Each, 1.00
No. 78LCP	—⅞-inch long, carbon-proof	Each, 1.00
No. 78DT	—⅞-inch Dodge, plain	Each, 1.00
No. 78DCP	—⅞-inch Dodge, carbon-proof	Each, 1.00

No. SAET	—SAE regular, plain	Each, 1.00
No. SAECP	—SAE regular, carbon-proof	Each, 1.00
No. SAELT	—SAE long, plain	Each, 1.00
No. SAELCP	—SAE long, carbon-proof	Each, 1.00
No. SAEXLT	—SAE extra long, plain	Each, 1.00
No. SAEXLCP	—SAE extra long, carbon-proof	Each, 1.00

No. 78LBT
No. 78LBCP

No. 12LT
No. 12LCP

No. 12RCP

No. 18MT
No. 18MCP

No. 18SMT

No. 18SMS

No. 78LBT	—⅞-inch long body, plain	Each, 1.00
No. 78LBCP	—⅞-inch long body, carbon-proof	Each, 1.00
No. 12LT	—½-inch long, plain	Each, 1.00
No. 12LCP	—½-inch long, carbon-proof	Each, 1.00
No. 12RCP	—½-inch regular, carbon-proof	Each, 1.00

No. 18MT	—Metric regular, plain	Each, 1.00
No. 18MCP	—Metric regular, carbon-proof	Each, 1.00
No. 18SMT	—Metric short, plain	Each, 1.00
No. 18SMS	—Metric short, special	Each, 1.00

A C Two-Piece Spark Plugs

No. 78ACTP

No. 78LACTP

No. 12ACTP

No. 12LACTP

No. 78ACTP	—⅞-inch, regular two-piece, carbon-proof	Each 1.25
No. 78ACTP	—⅞-inch, long, two-piece, carbon-proof	Each 1.25
No. 12ACTP	—½-inch, regular two-piece, carbon-proof	Each 1.25
No. 12LACTP	—½-inch long, two-piece, carbon-proof	Each 1.25

No. AC1075 Special for Ford

Fitted with spring terminal clip which assures tight connection and easy attachment. Plug comes apart for cleaning. Ribbed carbon-proof porcelain. Heavy electrode designed to form natural drain for oil.

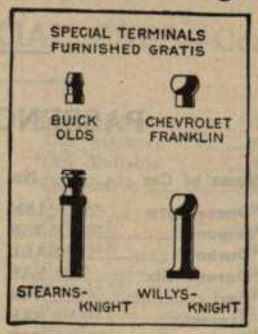
No. AC1075—Special for Ford . . . . . Each, .75

AC Quick Sellers

These Displays and Stock Cases occupy a minimum counter space and by keeping the item prominently before your customers it will increase your sales of spark plugs. Made in four types. Furnished to dealers without charge on an order for quantity of plugs the respective cabinets will hold, or if some plugs already in stock, then furnished on an order for the quantity necessary to increase the stock to cabinet capacity.

Regular type holds 140 Assorted AC Plugs.
Junior type holds 50 Assorted AC Plugs.
AC1075 type holds 50 AC1075 AC Plugs.
Chevrolet type holds 50 Chevrolet AC Plugs.

Special Terminals for Spark Plugs



Any of the above terminals furnished without charge when specified with AC Spark Plugs.

AC Spark Plug Kits

A metal box holding four AC Plugs. Enables a motorist to carry spare plugs in the tool box without becoming damaged. Kits furnished free to dealers on basis of one kit for each ten plugs.

Bethlehem Spark Plugs

No. 2 No. 29 No. 27

No. 2—Special for Studebaker, ⅞-inch hex, ⅞-inch thread. Special design. Semi-petticoat core. Each, .75
No. 29—Special for Buick. 1⅛-inch hex, ⅞-inch long thread. Conical core. Special terminals. Each, .75
No. 27—1⅛-inch hex, ⅞-inch thread. Long body. Conical core . . . . . Each, .75

No. 8 No. 6 No. 10

No. 8—Special for Ford. Used on Ford cars and tractors as original equipment. Listed as Ford Part No. 5200. ½-inch thread with extension. Each, .60
No. 6—⅞-inch hex, ½-inch regular thread. Conical core . . . . . Each, .75
No. 10—1-inch hex, metric thread . . . . . Each, .75

No. 07 No. 019 No. 027

No. 07—Conical core, ⅞-inch hex, S. A. E. thread. . . . . Each, .75
No. 019—Conical core, ⅞-inch hex, S. A. E. long thread . . . . . Each, .75
No. 027—Conical core, 1⅛-inch hex, ⅞-18 regular thread . . . . . Each, .75

No. 029 No. 08 No. 88

No. 029—Conical core, 1⅛-inch hex, ⅞-18 long thread . . . . . Each, .75
No. 08—Conical core, ⅞-inch hex, ½-inch long thread. . . . . Each, .75
No. 88—½-inch extra long mica core for Hart Parr and Waterloo Boy Tractors . . . . . Each, 1.50

Tractor Spark Plugs

Same sizes and general design as No. 90 Series, except has ordinary wound mica core.

No. 81—¾-inch, regular. . . . . Each, 1.50
No. 82—¾-inch, long. . . . . Each, 1.50
No. 84—⅞-inch, regular. . . . . Each, 1.50
No. 85—⅞-inch, long. . . . . Each, 1.50

All Spark Plugs packed 10 in a box.

De Luxe Mica Tractor Spark Plug

The mica is wound laterally around the center spindle and washers are placed over this, extending from one end of spindle to other, giving a form of laminated construction, put on under high pressure. Shell ground electrode. Adopted as exclusive ground electrode. Adopted as equipment on all International Harvester Tractors.

No. 91—¾-inch, regular. . . . . Each, 2.25
No. 92—¾-inch, long. . . . . Each, 2.25
No. 94—⅞-inch, regular . . . . . Each, 2.25
No. 95—⅞-inch long . . . . . Each, 2.25

Spark Plug Sizes

PASSENGER CARS

Name of Car	No.
Abbott-Detroit	78R
*Ace	SAE
Allen	78R
Alsace	78R
American	78L
*Ambassador	78R
*Anderson	78R
*Apperson Six 1924	SAEXL
*Apperson Eight	SAE
Auburn	78R
Austin	78R
*Bell	78R
Bellanger-Freres	18M
Biddle	78R
*Birch	SAE
*Bour-Davis	78R
Braddon	78R
Bradley	78R
Briscoe	78R
*Buick (to 1924)	78L
*Buick	SAEL
*Cadillac	78R
*Case	78R
*Chalmers	78R
Champion	78R
*Chandler to 1923	78LB
*Chandler 1923	78R
*Chandler Pikes Peak	78DCP
*Checker Cab	78R
*Chevrolet	78L
*Cleveland Car	78R
Climber	78R
*Cole	78R
Columbia	78R
Comet	78R
Commonwealth	SAE
Crane-Simplex	78L
Crawford	78R
Crow-Elkhart	78R
Cunningham	78D
*Daniels	78R
*Davis	78R
Dixie Flyer	78R
*Dodge Brothers	78D
Dorris	78R
*Dort	78R
*Dort Six	SAEXL
Douglas	78R
*Duesenberg	18M
*Dupont	78R
*Durant	SAEL
*Durant Six	SAE
*Earl	78R
Economy	SAE
Elcar	78R
Elgin	SAEXL
Empire	78R
*Essex	18MCP
*Falcon	12R
*Fergus	18M
Fiat	78R
*Flint Six	78R
Ford	AC1075
Franklin	SAEL
*Frontmobile	78R
Gardner	78R
Geronimo	78R
*Glide	78R
Grant	78R
*Gray Dort	78R
Hal	78R
H. C. S.	78R
Hamlin-Holmes	78R
*Hanson Six	78D
*Hanover	78L
Harroun	78R
*Hatfield	78R
*Haynes	SAE
Hollier	78R
Holmes	78R
*Hudson (to 1921)	78R
*Hudson	18MCP
*Hupmobile	78R
Inter-State	78R
*Jackson	78R
Jeffery	78R
*Jewett	78R
Jones	78R
*Jordan	78R
King	78R
*Kissel-Kar	78L
Kline-Kar	78R
*LaFayette	78R
Lambert	78R
*Leach	78R
Lenox	78R
Lexington	SAE
*Liberty	78R
Lincoln	78R
Locomobile	SAES
*London Six	SAE
*Lorraine	78R
*Maibohm	78R
Marion-Handley	78R
*Marmon	SAE
*Maxwell	78R
*McFarlan	SAEXL
*McLaughlin	SAEL
*McLaughlin to 1924	78L
Mercer	78R
Meteor	78R
Metz	SAE
Metz (up to 1919)	12XL
*Mitchell	SAE
Moline-Knight	78R
Monitor	78R
*Monroe	SAE
Moon	78R
Moore	78R
*Nash Four	SAEXL
*Nash Six	SAEL
*National	78R
*Nelson	78R
*Noma	78R
Northway	SAE
*Oakland	78L
*Oakland (to 1923)	SAEL
*Oakland (to 1918)	78R
*Ogren	SAEL
*Oldsmobile 8	78R
*Oldsmobile (4-6)	SAEL
Olympian	SAEL
Owen-Magnetic	78R
Overland Four	12RCP
Packard	78R
*Paige	78R
*Pan	78R
*Pan American	78R
Parenti	78R
*Patterson	78R
Pathfinder	SAE
Peerless	78R
Phianna	78R
*Piedmont	78R
Pierce Arrow	78R
*Pilot	78R
Pitcher	78R
*Premier	SAEL
Premocar	78R
Ranger	78R
Reo	12L
*Revere	78RAT
Roamer	78RAT
*Richelieu	78R
Rickenbacker	78D
*Rock Falls	SAE
Rolls-Royce	18M
*R. & V. Knight	78R
*Sandlow Taxicabs	78R
*Saxon	SAEL
Sayers	78R
*Scripps-Booth 4	78L
*Scripps-Booth 6	SAE
*Scripps-Booth C	18SM
*Seneca	78R
Severin	78R
*Sheridan	78L
*Singer	SAE
Skelton	78R
S. S. E.	78R
*Standard 8	SAE
*Stanwood	78D
*Star	78R
*Stearns-Knight	SAE
Sterling	SAE
Stephens	78L
Stevens-Duryea	78LB
Stewart	78R
Studebaker	SAE
" (up to 1920)	12CP
Stutz	SAE
*Tarkington	SAE
*Templar	SAE
*Texan	78R
Tulsa	78R
Velie	78R
*Vogue	78R
*Washington	SAE
*Wescott	78R
White	78LB
Wills-Sainte-Claire	18M
Willys-Knight	78LB
*Winton	78R
Winther	78R
*Yellow Cab	78R

COMMERCIAL CARS

Acason	78R
*Ace	78R
Acme	78R
*Ahrens Fox	78R
*Ajax	78R
American LaFrance	78R
*Apex	78R
*Atco	78R
Atlas	78R
Autocar	78R
*Available	78R
*Avery	78R
Beck Hawkeye	78R
*Bell	78R
Bessemer	78LB
Bethlehem	78R
*Betz	78R
*Bollstrom	78R
*Bridgeport	78R
*Brinton	78LB
*Brockway	78R
*Buffalo	78R
Champion	78R
Chase	78R
*Chevrolet	78L
*Chicago	78R
*Clark Truck Tractor	78R
Clydesdale	78R
Collier	78R
Columbia	78R
Comet	78R
*Commerce	78R
Conestoga	78R
*Corbitt	78R
*Dart	78R
Day Elder	78R
*Dearborn	78R
*Defiance	78R
*Denby	78R
*Dependable	78R
*DePue	78R
*Diamond "T"	78R
*Diehl	78LB
*Dodge Brothers	78D

*Indicates models so marked use A C Spark Plugs as standard equipment.

Spark Plug Sizes—Continued

COMMERCIAL CARS—Cont'd

Name of Car	No.
Dorris	78R
Duplex	78R
Duty	SAEL
*Eagle	78R
Elmira	12R
Fageol	78R
Famous	78R
*Fargo	78R
*Federal	78R
Ford	AC1075
Forschler	78R
Frontmobile	78R
Fulton	78R
*F. W. D.	78R
Gabriel	78R
Garford	78R
*Gary	78R
Gersix	78R
*Giant	78R
*G. & J.	78R
*G. M. C.	78R
*Golden West	78R
*Graham Bros.	78D
Graham Bernstein	78R
Grant	78R
Hatchett	78R
*Hahn	78LB
*Hall	78R
*Harvey	78R
Hawkeye	78R
*Hendrickson	78R
*Hewitt-Ludlow	78R
*Highway-Knight	78R
Hoover	78R
*H. R. L.	78R
Huffman	78R
*Hurlburt	78R
*Huron	78R
*Independent	78R
*Italia	78R
International	78R
J. & J.	78R
J. & T.	78LACTP
Jumbo	78R
*Kalamazoo	78R
*Karavan	78R
*Kearns	78R
Kelley-Springfield	78R
*Keystone	78R
Kimball	78R
*Kissel-Kar	78R
*Kleiber	78R
*Klemm	78R
*Koehler	78R
*K-Z	78R
Larrabee-Deyo	78LB
Lippard-Stewart	78R
*L. M. C.	78R
Low-Bed	78R
Maccar	78R
Mack	78LB
*Mason	78R
*Master	78R
*Maxim	SAEXL
*Maxwell	78R
*Menominee	78R
Midland	78R
*Moreland	78R
Muskegon	78LB
Mutual	78R
*Napoleon	SAE
*Nash	78R
*Nelson-LeMoon	78R
*Netco	78R
*Noble	78R
Northwestern	78R
*Odgen	78R
O. K.	78R
Old Hickory	78R
*Old Reliable	78R
*Oldsmobile	SAEL
Oneida	78R
Oshkosh	78R
Packard	78R
*Paige	78R
*Parker	78R
*Patriot	78LB
Peerless	78R
*Penn	78R
Pierce Arraw R-9	18M
Other models	78R
*Pioneer	78R
*Pittsburgher	78R
*Power	78D
Ranier	78R
Ranger	78R
*Red Ball	78R
Reliance	78R
*Reo	12L
*Republic	SAE
Reynolds	78R
Riker	SAE
*Robinson	78LB
Rock Falls	78R
*Rowe	SAE
St. Cloud	78R
*Samson	78R
*Sandow	78R
*Sanford	78R
Sauer	78R
Seagrave	78LB
*Seneca	78R
*Shaw	78R
*Signal	78R
S. & S.	78D
Standard	78R
*Stanwood	78D
*Sterling	78R
*Stewart	78R
*Stroughton	78R
Studebaker	SAE
" (up to 1920)	12R
*Sullivan	78R
*Super	78LB
Superior	12R
Swartz	78LB
Taylor	78R
*Texan	78R
*Tiffin	78R
*Titan	78LB
*Tower	78R
Traffic	78R
Transport	78R
Triangle	78R
Triumph	78R
*Twin City	78R
Union	78R
*United	78R
United States	78R
Universal	78R
Velie	78R
*Vim	78R
*Wachusett	78R
*Walter	78R
*Ward LaFrance	78RCP
*Watson	78R
*White ¾-2-ton	18LBLTM
All others	78LB
*White Hickory	78R
*Wichita	78R
Wilcox Trux	78R
*Wilson	78R
Winther	78R
*Witt-Will	78R
Wolverine	78LB

TRACTORS

*Advance Rumley	78R
Allis-Chalmers	78R
Allwork	78R
American	SAEL
Appleton	78R
*A. & T.	78R
All others	12R
Aro	12L
Automotive	78R
Avery (5-10)	78R
All others	12R
*Bates	SAEL
*Beaver	SAE
Beeman Garden	12R
Beltrail	78R
Boring	78R
Buckeye	12L
*Buffalo	78R
*Bullock	78R
Burn-Oil	78R
*J. I. Case	78R
*Clark	78R
Cletrac	78R
Coleman	78L
*Comet	78R
Dakota	78R
*Dart	78R
Deere	78R
Dependable	78R
Dill	78R
*Do-It-All	SAEXL
*Eagle	12R
E-B	12R
*Elwood	12CP
Farm Horse	78R
*Flour City	12L
Fitch	78L
Fordson	AC1075
*Franklin	78R
Frick	SAEL
*Grain Belt	78R
Gray	78R
Happy Farmer	12R
*Hart-Parr	12R
Heider	78R
*Holt Caterpillar	
(Up to 1921)	78R
(New Models)	78LB
*Howell	12R
*Howell (to '18)	78L
Huber ("4")	78R
Huber (35-70)	12R
Illinois	78R
Imperial 40	78R
International	SAE
J. & T.	78L
Kardell Utility	78R
K-G	12R
*Knox	SAEXL
*LaCrosse	12R
*Lauson	78R
Leader B12-18	12R
Leader C18-36	78R
Leonard	78R
Liberty	78R
*Linn	78R
Little Giant	12L
*Lombard	78LB
Market Garden	78L
Merry Garden	78R
*Minneapolis	12R
Moline-Univ.	12SCP
Monarch	78R
National	78R
Neverslip	SAEL
*New Britain	12R
O. K.	78R
Oil-Pull	78R
Oldsmar	12R
Parrett	78R
Peoria	78R
*Pioneer	12R
Plow Man	78R
Port Huron	78L
Post	78R
Power	12R
Royer	SAEL
Russell (40-80)	12R
Others	78R
1921	78LB
*Samson	78R
Sandusky	78R
Sawyer-Massey	SAEL
Shawnee	78R
Short Turn	78R
*Sprywheel	12L
Star	78R
Stearns	78R
Stinson	78L
Strike-Unit	78R
*Stockton	78R
Square Turn	78R
*Tioga	78R
Titan	SAE
Topp Stewart	78R
*Townsend	12R
Tracklayer	12R
Traylor	78R
Triumph	78R
Turner	78R
Twin City	SAE
Uncle Sam	78R
*Ursus	78R
Utilitor	SAE
Velie	78R
Victory	78R
Wallis	SAE
Waterloo Boy	12L
*Wetmore	78R
Whitney	78R
Wisconsin	78R
Yankee	78R
Yuba	78R
20-35-40-70	12LT

*Indicates models so marked use A C Spark Plugs as standard equipment.

Automobile Fuses

Made in accordance with the specifications of the Society of Automotive Engineers. Ferrules are brass, nickel finish, and have amperage stamped thereon. Glass tube.

Packed 10 in a package, 10 packages in a box.

Orders may be assorted to make 100 quantity.

Size, ¼x⅝ inches.
Weight per 100, 7 oz.

No.	Amperes	Each	No.	Amperes	Each
1AG 5.....	5	.05	1AG15.....	15	.05
1AG10.....	10	.05	1AG20.....	20	.05

Size ¼x1 5/16 inches
Weight per 100, 8 oz.

No.	Amperes	Each	No.	Amperes	Each
2AG 5.....	5	.05	2AG15.....	15	.05
2AG10.....	10	.05	2AG20.....	20	.05

Size ¼x1¼ inches.
Weight per 100, 8 oz.

No.	Amperes	Each	No.	Amperes	Each
3AG 5.....	5	.05	3AG15.....	15	.05
3AG10.....	10	.05	3AG20.....	20	.05

Size 5/32x1¼ inches.
Weight per 100, 12 oz.

No.	Amperes	Each	No.	Amperes	Each
4AG 5.....	5	.10	4AG15.....	15	.10
4AG10.....	10	.10	4AG20.....	20	.10

Size 13/32x1½ inches.
Weight per 100, 1½ lbs.

No.	Amperes	Each	No.	Amperes	Each
5AG 5.....	5	.10	5AG20.....	20	.10
5AG10.....	10	.10	5AG25.....	25	.10
5AG15.....	15	.10	5AG30.....	30	.10

No. 6AG Series

Size 13/16x2 inches. Weight per 100, 3½ lbs.

No.	Amperes	Each	No.	Amperes	Each
6AG 5.....	5	.20	6AG20.....	20	.20
6AG10.....	10	.20	6AG25.....	25	.20
6AG15.....	15	.20	6AG30.....	30	.20

Automobile Fuse Assortment

Contains a total of 100 fuses, as follows:

10—1AG..... 5	20—3AG.....20
20—1AG.....20	10—4AG.....10
20—3AG.....10	5—4AG.....15
10—3AG.....15	5—5AG.....30

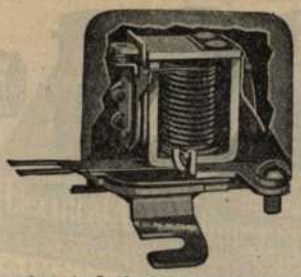
Packed in an attractive counter box.

No. A.....Each, $7.20

Partial List of Cars Showing Proper Fuses to Use

Make	Fuse	Amp.
Apperson 1923	3AG	20–10
Apperson 1920-21-22-23-24	1AG	20
Auburn	3AG	20
Beggs 1919-20	1AG	10
Cadillac 1913	4A	15
Cadillac 1914	6A	25
Case 1916	5AG	5–15
Case 1917-18	1AG	20
Case 1919	3AG	15
Case 1920-21-22-23	3AG	15
Chalmers 1918 to 1924	2AG	20
	1AG	5
Chandler 1917 to 1924	3AG	20
Chevrolet, Model 490	2AG	20
Chevrolet 1922	2AG	20
Cleveland	2AG	5–20
Davis	1AG	20
	5AG	15
Dixie Flyer 1917 to 1924	3AG	20
Dodge	4AG	10
Dort 1916 to 1924	1AG	10
	2AG	15
Durant 1922-23-24	2AG	20
Elgin Six	1AG	5–20
Essex	4AG	10
	1AG	10
Flint	3AG	15
	1AG	5
Franklin 1917 to 1924	2AG	10
Gardner 1921-22-23-24	3AG	20
	2AG	5
Grant 1917 to 1924	3AG	20
Gray	3AG	15
Haynes 1917 to 1921	1AG	5
Haynes 1922 to 1924	2AG	20–5
Hudson	1AG	10
	4AG	10
Hupmobile 1919 to 1924	3AG	10–5
Jewett	3AG	6
	1AG	20
Jordan 1917-18-19	3AG	20
Jordan 1919	1AG	20
Kissel Kar 1916 to 1924	3AG	20
Lexington 1915 to 1924	5AG	15
Lexington 1915-16-17	3AG	15
Liberty 1922 to 1924	3AG	15
Marmon	4AG	20
Maxwell 1921 to 1924	2AG	20
Monroe	1AG	20
Moon 1920 to 1924	2AG	15
	3AG	20
Nash, Model 681-1918	3AG	20
Nash 4, also 6	1AG	20
National 1919 to 1924	1AG	20
Oakland, Model 34	4A	15
Oakland 1920 to 1924	2AG	5
Oldsmobile 1921 to 1924	1AG	20
Overland, Models 79 and 83	1AG	20
Overland 1916 to 1920	1AG	20
Overland, Model 4, 1920-24	3AG	20
Packard	2AG	10
Paige	1AG	20
Peerless 1916 to 1924	1AG	10
Premier	4A	10
Reo Light Six 1922-24	4AG	6
Rickenbacker	2AG	20
	1AG	5
Roamer 654-E	3AG	10–20
Roamer 475	5AG	15
R. & V. Motors 1921-22	6A	20
Star	2AG	20
Stearns 4	1AG	5
	2AG	20
Stearns 6	2AG	5
	2AG	20
Stephens 1920 to 1924	3AG	20
Studebaker 1916 to 1922	3AG	10
Stutz 4	3AG	20
Velie	3AG	20
Willys-Knight 1921 to 1924	2AG	15

Kingston Cut-Out



It is so constructed that it may be placed directly upon the generator on a Ford car and no extra wiring or additional labor is required. All work is done with the same care and accuracy that characterizes the finest watch, and the device is guaranteed. Heavy steel cover renders it waterproof. Built to withstand vibration wear and tear.

Kingston Cut-Out.....Each, 1.10

Trouble Lamps

No. 276 has one-third reflector, wire guard, 10 feet of cord, battery terminals, adjustable hook hanger, bayonet lamp socket and 6-volt, 4-candle-power bulb.

No. 277 is same as No. 276 but fitted with either single or double contact plug. Orders must specify which is wanted.

No. 276. .....Each, 1.25
No. 277. .....Each, 1.50

Push and Pull Switches

Black enameled finished plate and nickel-plated buttons.

No. 425 —Single. .....Each, .40
No. 425-2—2 Gang.....Each, .80
No. 425-3—3 Gang.....Each, 1.20
No. 425-4—4 Gang.....Each, 1.60

Anchor Light Switches

Nickeled plate with black button.

No. 417—Single.....Each, .50
No. 417—2 Gang.....Each, 1.00

Toggle Switches

Black enameled with nickel lever.

No. 450 —Single.....Each, .35
No. 450-2—2 Gang.....Each, .70
No. 450-3—3 Gang.....Each, 1.05

"Easy On" Push and Pull Switch

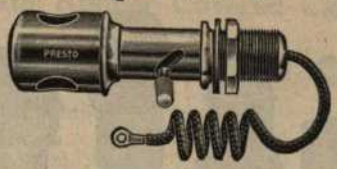
The simplicity of installation of this switch makes it a big labor saver. Only requires a ¼-inch hole through the dash.

Made in two lengths to fit dash-boards of any thickness.

No. 430—Presto "Easy On" Push and Pull Switch for metal dash only.....Each, .60

No. 431—Presto "Easy On" Push and Pull Switch for combination wood and metal or all wood dashes up to ⅞ inch in thickness.....Each, .60

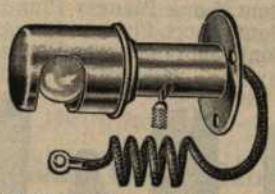
Dash Lamp Outfit for Ford



The long threaded shank permits its use with either steel or wood dash. Equipped with a lever switch which is positive and easy to operate. Fitted with a wire and terminal ready to fasten to the tail light binding post on back of ignition switch. The new type reflector has two holes and throws a light both to the right and left. Heavily nickel plated. Furnished with 6-volt 2-candle power bulb. Length from dash to bulb center 1¾ inches. Made single contact only.

No. 685S.....Each, 1.00

Dash Lamps



No. 682S Dash Lamp especially designed for all metal or metal covered wood dash, furnished complete with wire for attaching as illustrated, and 6-8 volt, 2 C. P. bulb. Length from dash to bulb center 2 inches. Made single contact only.

No. 682S.....Each, .9(

A close, compact lamp for countersunk clocks, speedometer, etc. Complete with 6-volt, 2-candle power tungsten bulb. Has a nut to hold lamp in place. Length from dash to bulb center 1⅛ inches.

No. 640.....Each, .9(

Metal dash lamp with self-contained lever switch complete with bayonet type lamp socket, 6-volt, 2-candle power tungsten bulb and nut for metal dash. Length from dash to bulb center 1½ inches.

No. 655S.....Each, 1.25

Dash or instrument board lamp fitted with oval flange for wood dash. Very close and compact. 6 volt 2 candle power bulb. Length from dash to bulb center 1⅛ inches.

No. 645.....Each .9(

Full nickel plated, with self-contained switch. Flush back, especially designed so that only small holes need be drilled for the attaching wires. Bayonet type lamp socket and 6-volt, 2-candle power tungsten bulb. Length from dash to bulb center 2⅛ inches.

No. 680S.....Each, .90

All items on this page packed one in a box.

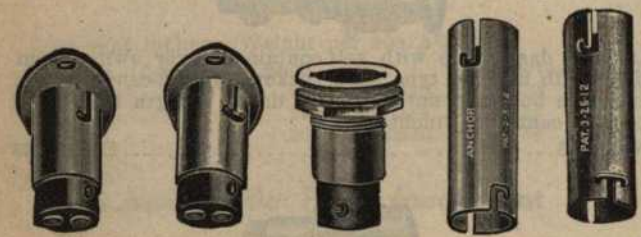
Rubber Plugs and Connectors

No. 1 No. 2 No. 4 No. 4-C No. 4-PS No. 4-PL

No. 1 Cap, threaded.....Each, .04
No. 2-D Dbl. Cont. Plug, threaded.....Each, .12
No. 2-S Sgl. Cont. Plug, threaded.....Each, .12
No. 4-D Dbl. Cont. Plug and Cap.....Each, .15
No. 4-S Sgl. Cont. Plug and Cap.....Each, .15
No. 4-B Dbl. Cont. Special Plug to fit Ford.....Each, .15
No. 4-C Plug and Cap to make Sgl. Cont. out of Dbl. Cont.....Each, .30
No. 4-PLD Dbl. Cont. Long Plunger Plug.....Each, .25
No. 4-PLS Sgl. Cont. Long Plunger Plug.....Each, .25
No. 4-PSD Dbl. Cont. Short Plunger Plug.....Each, .25
No. 4-PSS Sgl. Cont. Short Plunger Plug.....Each, .25

No. 13-P No. 14-P No. 44-P No. 175 No. 135-P No. 137-P No. 140-P

No. 13-P Lamp and Plug Socket, side lead, DC..Each, .25
No. 14-P Lamp and Plug Socket, end lead, DC..Each, .25
No. 44-PD Lamp Socket with rubber cap, DC...Each, .30
No. 44-PS Lamp Socket with rubber cap, SC...Each, .30
No. 135-P Double Contact Focusing Socket for Ford headlights.....Each, .25
No. 137-P Single Contact Focusing Socket for Maxwell headlights.....Each, .30
No. 140-P Single Contact Focusing Socket for Overland headlights, all models.....Each, .30
No. 175 Spring and Screw for Ford Focusing Sockets .....Each, .15



No. 18-P No. 68-P No. 128-P No. 5-P No. 6-P

No. 18-P Dash Socket, plain.....Each, .35
No. 68-P Dash Socket, switch type.....Each, .40
No. 128-P Metal Dash Socket.....Each, .40
No. 5-P Double End Socket, plain.....Each, .25
No. 6-P Double End Socket, switch type.....Each .25

No. G118 No. G117 No. G156 No. G153

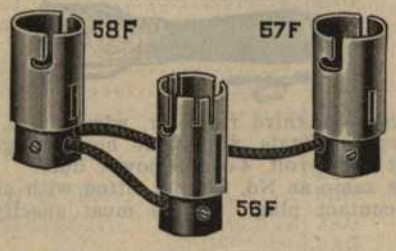
No. G118 Overland Head Light Plug for models prior to 1919.....Each, .25
No. G117 Overland Tail Light Plug for models prior to 1919.....Each, .25
No. G156 Maxwell Head Light Plug, all models..Each, .25
No. G153 Maxwell Tail Light Plug, all models..Each, .25

Rubber Plugs and Connectors—Cont.

No. 8 No. 146 No. 150 No. 151 No. 152

No. 8 Elbow Plug and Cap.....Each, .35
No. 150 Overland Headlight Plug for 1916-18 models .....Each, .25
No. 146 Overland Headlight Plug for 1919 models .....Each, .25
No. 151 Overland Tail Light Plug for 1916-20 models .....Each, .25
No. 152 Overland Head and Tail Light Plug for 1920 model 4 "Baby".....Each, .35

Headlight Assembly for Starter Equipped Ford Cars



No. 5678—Assembly complete.....Each, .95
No. 56F—Separately.....Each, .25
No. 57F—Separately.....Each, .25
No. 58F—Separately.....Each, .25

Rubber Connectors Assortment*

This makes an excellent assortment, as it contains only the quick sellers. The cabinet can be furnished separately on special order. Regularly furnished with the following:

				Each	Total
20	No.	4-D Plugs	D. C.	$0.15	$3.00
5	No.	4-S "	S. C.	$0.15	$0.75
5	No.	4-C "	D. C. to S.C.	$0.30	$1.50
6	No.	4-PLD "	D. C. long	$0.25	$1.50
6	No.	4-PLS "	S. C. long	$0.25	$1.50
3	No.	4-PSD "	D. C.	$0.25	$0.75
3	No.	4-PSS "	S. C.	$0.25	$0.75
3	No.	6-P Sockets	D. C.	$0.25	$0.75
3	No.	5-P "	S. C.	$0.25	$0.75
6	No.	14-P "	D. C.	$0.25	$1.50
3	No.	14-P "	S. C.	$0.25	$0.75
6	No.	135-P "	D. C.	$0.25	$1.50
3	No.	137-P "	S. C.	$0.30	$0.90
3	No.	68-P "	D. C.	$0.40	$1.20
3	No.	18-P "	S. C.	$0.35	$1.05
3	No.	430 Easyon Switches		$0.60	$1.80
2	No.	431 Easyon Switches		$0.60	$1.20
5	No.	425 Push and Pull switches		$0.40	$2.00
5	No.	450 Toggle Switches		$0.35	$1.75
		Total Assortment			$24.90
		Presto Wood Cabinet only for Assortment		Each,	$ 5.60

Metal Display Cabinet

Very attractive, made of steel and wood with letters lithographed in white and red on a green background, with Glass Covered Display. Has wooden base and compartment drawer for stock.

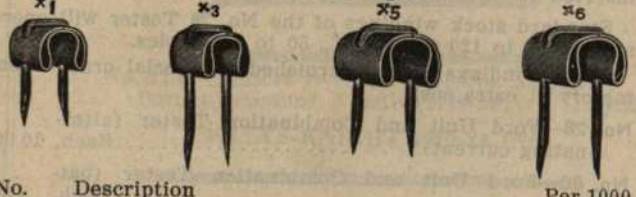
Height 10½ inches. Length 18½ inches. Breadth 12½ inches.

Regularly furnished with the following:

				Each	Total
20	No. 4	Plugs	D. C.	$0.15	$3.00
5	No. 4	"	S. C.	$0.15	$0.75
5	No. 4C	"	D. C. to S. C.	$0.30	$1.50
6	No. 4P	"	D. C. Long	$0.25	$1.50
6	No. 4P	"	S. C. Long	$0.25	$1.50
3	No. 4P	"	D. C. Short	$2.25	$0.75
3	No. 4P	"	S. C. Short	$0.25	$0.75
3	No. 6P	Sockets	D. C.	$0.25	$0.75
3	No. 5P	"	S. C.	$0.25	$0.75
6	No. 14P	"	D. C.	$0.25	$1.50
3	No. 14P	"	S. C.	$0.25	$0.75
6	No. 135P	"	D. C.	$0.25	$1.50
3	No. 137P	"	S. C.	$0.30	$0.90
3	No. 68P	"	D. C.	$0.40	$1.20
3	No. 18P	"	S. C.	$0.35	$1.05
3	No. 430	Easy On Switches		$0.60	$1.80
2	No. 431	" "		$0.60	$1.20
5	No. 425	Push and Pull Switches		$0.40	$2.00
5	No. 450	Toggle Switches		$0.35	$1.75
4	No. 685S	Dash Lamps	S. C.	$1.00	$4.00
4	No. 682S	" "	S. C.	$0.90	$3.60
2	No. 680S	" "	D. C.	$0.90	$1.80
2	No. 647S	" "	D. C.	$1.00	$2.00

Total Assortment.....$36.30
Presto Metal Display Cabinet only.....$ 7.00

Insulated Staples



No.	Description	Per 1000
1	—For single wire or twisted pair	$4.50
3	—For single wire or twisted pair	$4.50
5	—For heavy pair or twisted 3-wire	$5.70
6	—For heavy pair or twisted 3-wire	$5.70

Brewery Cord

Each strand is rubber rubber insulated and braided with black weather-proof cover, and the two strands twisted together. Slightly larger than regulation lamp cord.

No. 471.....Per 100 ft., $3.60
250 feet in a coil.

Lamp Cord

Green and yellow braided cover, new code No. 18 cord.

No. 747.....Per 100 ft., $3.70
250 feet in a coil.

Plain Rubber Covered Cable

Special rubber composition insulation.

No.	Diam.	Use	Per 100 ft.
23P	5 mm	Primary	$ 5.10
25P	7 mm	Secondary	$ 8.60
16	7.2 mm	Magneto	$10.10

100 ft. in a coil.

Braided Cover Cable

A braided cover over rubber insulation. No. 23BB has a double fabric covering, making it an extra high grade cable.

No.	Diam.	Use	Per 100 ft.
MPS69	⅛ in.	Primary and lighting	$5.00
23BB	7/32 in.	Primary and lighting	$5.10
71	11/64 in.	Primary and lighting	$4.20
73	13/64 in.	Primary and lighting	$4.70
25B	5/16 in.	Secondary	$9.00

100 ft. in a coil.

Braided Cover Cable

Braided cover with 2 wires under the one cover for twin lighting purposes or wherever two wires are needed, for double contact service. 23/64 inch diameter.

No. 86.....Per 100 ft., $14.50
100 ft. in a coil.

Armored Cable

No. 258 Single

No. 266 Double

A coppered wire covering over rubber insulation.

No.	Diam.	Use	Per 100 ft.
258	5/32 in.	Single lighting	$ 7.30
266	9/32 in.	Twin lighting	$16.00

100 ft. in a coil.

Stage Cable

A heavy rubber insulated double fabric covered cable suitable for drop cords, extensions, etc. No. 18 gauge, 1/16 inch diameter.

No. 18.....Per 100 ft., $12.60
100 ft. in a coil.

Starting Cable

A very heavily insulated, varnished cambric covered cable used for starting cables.

No.	Diam.	Use	Per 100 ft.
54	5/8 in.	Starting	$56.00
56	¼ in.	Starting	$42.00
58	½ in.	Starting	$37.50

Jefferson Universal Coils

E-925 Bracket

E-930 Bracket

E-935 Bracket

E-940 Bracket

E-950 Resist Unit

The Jefferson Universal Coil is designed for replacement on all standard battery ignition systems and has many important advantages over any other coil of its kind now on the market.

With the Jefferson there are just four simple brackets, no intricate adapters and bases, and only one bracket attached to the coil makes the complete installation. Installation is quick and simple.

A heavy duty condenser is built into the coil, which can be utilized in the ignition circuit, or eliminated, as required. Where there already is a condenser in the circuit located on the breaker, the condenser in the coil can be "cut out" by the simple process of reversing the connections of the two primary terminals. There should never be two condensers in the same circuit. In the event of future condenser trouble, the Jefferson condenser is always in readiness to be inserted in the circuit. This exclusive feature greatly improves the appearance of the coil, saves the expense of separate condenser, simplifies stock by keeping separate parts down to a minimum, insures positive connections and condenser action at all times.

Windings and the condenser are assembled in a genuine Bakelite Tube, which is far superior to Fibre or Metal. Primary and secondary connections are brought out conveniently at the top of the coil through a molded Bakelite Cap.

To facilitate shipping and simplify sales effort the Jefferson Universal Coil with all fittings for 6 and 12-volt systems is packed in an individual carton. The complete outfit is known as the "No. 5 Jefferson Universal Coil Assortment" and consists of one E-900 coil, one each E-925, E-930, E-935 and E-940 Brackets and one E-950 Resistance Unit. This equipment will replace any coil on any standard battery ignition system and is recommended for the initial sale to the dealer. After the initial purchase, the dealer can replenish his stock by ordering coil and brackets separately as required.

Complete instructions accompany each coil. A car list shows the proper bracket to be used. Mounting arrangements are illustrated and complete diagrams show proper connections.

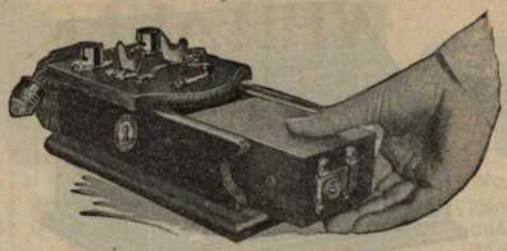
No. 5—Jefferson Universal Coil Assortment, complete with all necessary fittings for 6 and 12-volt systems (packed in individual carton)..... 10.00
E-900—Jefferson Universal Coil.....Each, 7.50
E-925, E-930, E-935, E-940—Brackets.....Each, .50
E-950—12-volt Resistance Unit.....Each, .50

Jefferson Gas Engine Coils and Switches

This troubleproof Coil is assembled in seasoned oak case and sealed in a waterproof compound. Points of best grade of tungsten.

No. 51—Single Cylinder.....Each, 4.00

Jefferson Ford Unit and Combination Tester



The Jefferson Ford Unit and Combination Tester is the handiest instrument the garageman, service station, repairman or dealer can have at his disposal. It is low in cost, operates without upkeep and with proper care will last a lifetime. Its features are speed and accuracy.

This instrument is so flexible that there is hardly a testing problem it will not solve. It is as compact, troubleproof and simple to operate as it is accurate and reliable. It will test single and double contact auto lamps of any voltage or candle power, spark plugs of any type, electric horns, battery jars, Ford coil units and other types of coils. In fact, it can be used for shooting electrical trouble of any nature. The equipment consists of the following:

Single and double contact lamp sockets.

Flexible spark plug testing rack.

Circuit for testing electrical signals, horns, coils, battery jars, etc., for finding electrical shorts and for starting Ford engines in cold weather.

Flexible spark gap over which jumps the spark from the Ford unit.

Compartment for testing Ford coil units.

A switch for varying the test voltage of the lamp sockets.

The No. 28 Tester, illustrated, is for attachment to the regular alternating current lighting circuit. It is furnished with extension cord and attachment plug. Where alternating current is not available we can furnish from factory a tester for connection to six volt storage battery or four dry cells. This is the No. 30 Tester.

Jefferson testing instruments are assembled in highly polished mahogany cases. All exterior metal parts are heavily nickeled, presenting a very neat and attractive appearance. The ends of the coil slot are grooved so that the Ford unit can be grasped conveniently when being inserted or removed.

Standard stock windings of the No. 28 Tester will operate on 100 to 120 volts A. C., 50 to 133 cycles.

Other windings can be furnished on special order from factory at extra cost.

No. 28—Ford Unit and Combination Tester (alternating current).....Each, 10.00

No. 30—Ford Unit and Combination Tester (battery current).....Each, 8.00

Steel Case Make and Break Coils

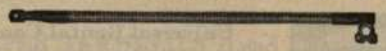
Designed to answer most rigid requirements of Stationary and Marine Make and Break Gas Engines.

No. 10—2¼x2¼x6-inch for engines up to 2½ H. P. .....Each, 1.75

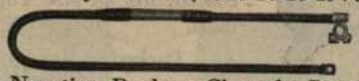
No. 15—2¼x2¼x6-inch, for engines of same size, but generates a larger spark.....Each, 2.00

WHITAKER BATTERY CABLES

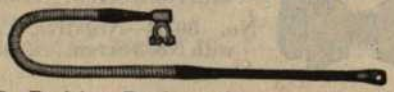
CHEVROLET 1916 TO 24 INC.



No. 109—Positive, Replaces Chevrolet Part No. H593—Battery to Switch, 1916-17-18-19 .....$1.30



No. 110—Negative, Replaces Chevrolet Part No. H594—Battery to Ground, 1916-17-18-19.....$1.50



No. 117—Positive, Replaces Chevrolet Part No. 4740—Battery to Switch, 1920-21-22.....$1.30

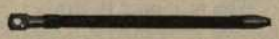
No. 118—Negative, Replaces Chevrolet Part No. 47401—Battery to Ground, 1920-21-22-23-24..$0.80

No. 119—Positive, Replaces Chevrolet Part No. 335389—Battery to Switch, 1923-24.....$1.00

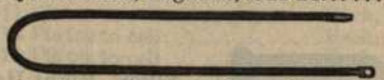
No. 120—Replaces Chevrolet Part No. 4592 Switch to Starting Motor, all models 1916 to 1924 inclusive.....$0.60

OVERLAND "LITTLE 4" 1919 to 24 Inc.

No. 111—Replaces Overland Part No. 300184 Battery to Switch, Positive.....$1.00

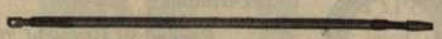


No. 112—Replaces Overland Part No. 306008 Battery to Ground, Negative, 1922-24.....$0.80

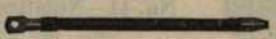


No. 113—Replaces Overland Part No. 300183 Battery to Ground, Negative 1919-21.....$1.25

WILLYS-KNIGHT 1919-24 INC.

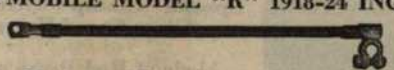


No. 131—Replaces Willys-Knight Part No. 302332 Battery to Switch, Positive.....$3.20

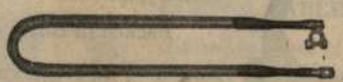


No. 132—Replaces Willys-Knight Part No. 302342 Battery to Ground, Negative.....$1.35

HUPMOBILE MODEL "R" 1918-24 INC.

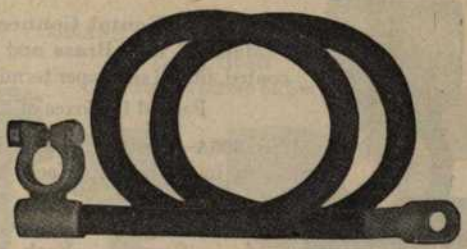


No. 135—Replaces Hup Part No. 45584A Battery to Ground, Positive.....$1.10



No. 136—Replaces Hup Part No. 45573A Battery to Switch, Negative.....$3.60

FORD 1919 to 24 INC.



No. 29—Replaces Ford part No. 5046 Battery to Switch, 1920-24, Positive.....$1.15

No. 34—Replaces Ford Part No. 5047 Battery to Switch, 1919-20, Positive..... 1.25

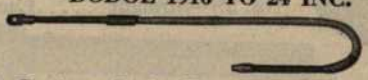
No. 25—Replaces Ford Truck part No. 5046C Battery to Switch, Positive..... 1.15

No. 11—Replaces Ford part No. 5049 Battery to Ground, Negative 1919-20..... .75

No. 13—Replaces Ford Part No. 5050 Battery to Ground, 1920-24..... .90

No. 27—Replaces Ford part No. 5051 Switch to starter..... 1.00

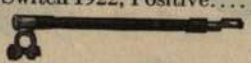
DODGE 1916 TO 24 INC.



No. 105—Replaces Dodge Part No's. 4992-11540 Battery to Switch 1915 to 21, Positive.....$0.95

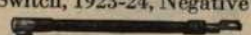
No. 106—Replaces Dodge Part No. W8957 Battery to Ground, 1915 to 21, Negative.....$0.60

No. 115—Replaces Dodge Part No. 14528 Battery to Switch 1922, Positive.....$1.70

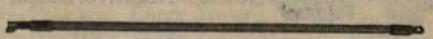


No. 116—Replaces Dodge Part No. 14525 Battery to Ground, 1922, Negative.....$0.85

No. 125—Replaces Dodge Part No. 16590 Battery to Switch, 1923-24, Negative.....$1.00



No. 126—Replaces Dodge Part No. 16592 Battery to Ground, 1923-24, Positive.....$0.35



No. 127—Replaces Dodge Part No. 4985 Switch to Starting Motor 1915 to 24, inclusive.$0.90

BUICK "SIX" All Models 1916 to 24 INC.

No. 107—Replaces all Models Six Cylinder Battery to General Wire Assembly, Positive..$2.25

No. 108—Replaces all models six cylinder Battery to Ground, Negative.....$0.75

WHITAKER BATTERY TERMINALS

Universal Rental Connector

Made of **Red Brass** and lead coated, fits all size taper terminals.

Packed in Boxes of 25

No. 808A—Positive, Tapped for 5/16 in. Screw....Each, **$0.50**

No. 807A—Negative, Tapped for 5/16 in. Screw.....Each, **$0.50**

Universal Rental Connector

Made of **Red Brass** and lead coated, fits all size Taper Terminals.

Packed in Boxes of 25.

No. 808B—Positive, Complete with No. 3 Screw...Each, **$0.60**

No. 807B—Negative, Complete with No. 3 Screw...Each, **.60**

WHITAKER RENTAL CONNECTOR

Made of **Red Brass** and lead coated, fits all size Taper Terminals.

Packed in Boxes of 25.

No. 1P—Positive.....Each, **$0.50**

No. 2N—Negative.....Each, **.50**

No. 3S—Straight.....Each, **.50**

FRIEL RENTAL CONNECTOR

Made of **Red Brass** and lead coated.

Packed in Boxes of 25

No. 60—Fits 5/16 Tapped Taper Terminal, Adjustable Positive or Negative.....Each, **$0.45**

No. 61—Fits 3/8 Tapped Taper Terminal Adjustable, Positive or Negative.....Each, **$0.45**

Closed Barrel Type

Made of **Red Brass** and lead coated, will fit 95% of Battery Posts.

Packed in Boxes of 25.

No. 85—Positive....Each, **$0.40**

No. 90—Negative...Each, **.40**

Split Barrel Type

Made of **Red Brass** and lead coated, will fit 95% of Battery Posts.

Packed in Boxes of 25

No. 86—Positive....Each, **$0.40**

No. 91—Negative...Each, **.40**

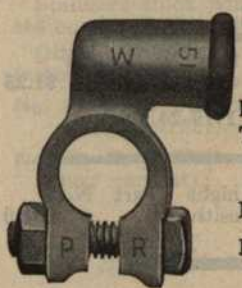
Elbow Left Hand

Made of **Red Brass** and lead coated. A very popular Terminal.

Packed in Boxes of 25.

No. 50—Positive...Each, **$0.45**

No. 40—Negative..Each, **.45**



Elbow, Right Hand

Made of **Red Brass** and lead coated. A very popular Terminal.

Packed in Boxes of 25.

No. 51—Positive..Each, **$0.45**

No. 41—Negative.Each, **.45**

Straight Type

Made of **Red Brass** and lead coated.

Packed in Boxes of 25

No. 10—Positive....Each, **$0.45**

No. 12—Negative...Each, **.45**

Special Clamp with Hour Glass Cored Barrel

Made of **Red Brass** and lead coated. Can be used on any Battery, all Cars.

Packed in Boxes of 25

No. 55—Positive...Each, **$0.45**

No. 56—Negative..Each, **.45**

WHITAKER BATTERY TERMINALS

TAPER TERMINALS (Lead Coated)
Packed in boxes of 50.

Large Positive
No. 8—Tapped 3/8. $0.30

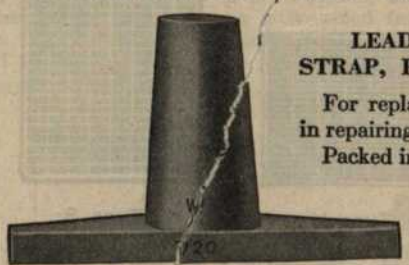
Large Negative
No. 7—Tapped 3/8. $0.30

Medium Positive
No. 23—Tapped 5/16. $0.30

Medium Negative
No. 24—Tapped 5/16. $0.30

Small Positive
No. 5—Tapped 5/16. $0.25

Small Negative
No. 6—Tapped 5/16. $0.25



LEAD PLATE STRAP, PLAIN TYPE
For replacing old Post in repairing Batteries
Packed in boxes of 25.

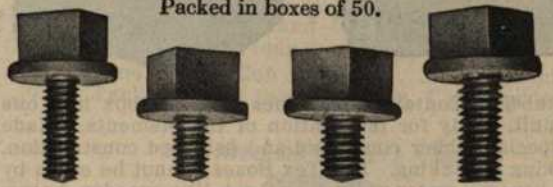
No. 720— 7 Plates to cell.....Each, $0.25
No. 721— 9 Plates to cell.....Each, .25
No. 722—11 Plates to cell.....Each, .25
No. 723—13 Plates to cell.....Each, .25
No. 724—15 Plates to cell.....Each, .25

LEAD PLATE STRAP EXIDE TYPE
A good strap to use in assembling of New Batteries or repairing.
Packed in boxes of 25.

No. 726— 7 Plates to cell.....$0.30
No. 727— 9 Plates to cell.....
No. 728—11 Plates to cell.....
No. 729—13 Plates to cell.....
No. 730—15 Plates to cell.....

COPPER CABLE LUG
Packed in boxes of 100.
Fits all size Battery starting Cable.
No. 300—½".....$0.12

BRASS TERMINAL SCREWS
Lead Head
Packed in boxes of 50.



5/16x1 — No. 1 $0.15
5/16x5/8 — No. 3 $0.12
3/8x5/8 — No. 4 $0.12
3/8x1 — No. 2 $0.15

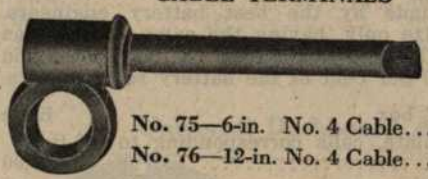
TERMINAL BOLTS
Lead Coated

Packed in boxes of 100.
No. 100—5/16x1¼...$0.08
No. 200—5/16x1½... .08

BRASS MACHINE CUTS SCREWS

Packed in boxes of 100.
Nos.
01—5/16x1..$0.08
02—3/8x1.. .08
03—5/16x5/8. .08
04—3/8x5/8. .08

CABLE TERMINALS



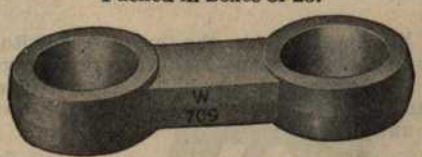
No. 75—6-in. No. 4 Cable.....$ .85
No. 76—12-in. No. 4 Cable..... 1.10

WILLARD OLD STYLE
Made of Red Brass and lead coated.
Fits all ¾ in. straight Post.
Packed in Boxes of 25.
No. 15—Pos. or Neg. Ea., $0.40

LEAD TERMINALS
Packed in boxes of 25.

No. 703—Positive Medium Taper.....Each, $0.25
No. 704—Negative Medium Taper.....Each, .25
No. 705—Positive Small Taper.....Each, .25
No. 706—Negative Small Taper.....Each, .25
No. 707—Positive Large Taper.....Each, .25
No. 708—Negative Large Taper.....Each, .25

LEAD (cell to cell) CONNECTORS
Packed in boxes of 25.



No. 709— 7 Plates to cell.....Each, $0.25
No. 710— 9 Plates to cell.....Each, .25
No. 711—11 Plates to cell.....Each, .25
No. 712—13 Plates to cell.....Each, .25
No. 713—15 Plates to cell.....Each, .25

Rub-Tex Compartment Battery Boxes

The Rub-Tex Container combines jars and box into one lasting unit, ready for installation of the elements. Made with a special rubber compound and patented construction. No cracking or leaking. Rub-Tex Boxes cannot be eaten by acid or become water-soaked and rot like wooden boxes. The material has high-tensile strength and superior insulating qualities. They are divided by solid partitions into compartments, forming the cells. Bridges are formed at the bottom at the same time. The rubber handle on the Rub-Tex Box is a part of the box itself and has been in successful use for more than a year. It removes all trouble with acid-eaten handles. The hold-down is a lead-sleeve over a wire insert, having all the advantages of a wire handle, but cannot be destroyed by acid.

Rub-Tex material has a distinct advantage over hard rubber, as it is not as brittle and will not break as readily. They have been in successful battery use on cars for more than two years and stand the tests for electrical and chemical action made by the best battery engineers. Built in the "B" size only, having the same cell size as regular "B" jars. "B" type Boxes take 4¾-inch Plates and will take care of 90 per cent of the battery requirements.

No.	Type of box	Each
-11B—	6 volt 11 plate, cells corresponding to S-8-B jars	5.00
-13B—	6 volt 13 plate, cells corresponding to S-10-B jars	5.60
-7B—	12 volt 7 plate, cells corresponding to S-4-B jars	7.00

Rub-Tex Uniseal Battery Covers

Gasket Type

Well Type, with Crown

Well Type

mplete line made from the same good Rub-Tex l. Now adopted by many manufacturers, large and because of their great durability. Not brittle like bber and much easier to work with. Made in l sizes and types.

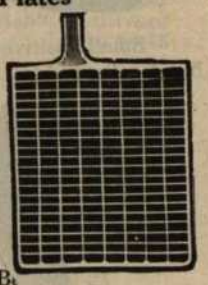
— 7 Plate or S 4 Gasket Type	Each,	.15
—11 Plate or S 8 Gasket Type	Each,	.17
—13 Plate or S10 Gasket Type	Each,	.19
— 7 Plate or S 4 Well Type	Each,	.15
— 9 Plate or S 6 Well Type	Each,	.16
—11 Plate or S 8 Well Type	Each,	.17
—13 Plate or S10 Well Type	Each,	.19
— 7 Plate or S 4 Crown Type	Each,	.15
— 9 Plate or S 6 Crown Type	Each,	.16
—11 Plate or S 8 Crown Type	Each,	.17
—13 Plate or S10 Crown Type	Each,	.19

Oak Wood Battery Cases

Cases are b ored for wire handles, but prices do not include Paint or Handles.

No.	Size Batte ry	Inside Dimensions L	W	D	Each
201—	11 pl. Stand ard	8	6¼	7½	$1.50
202—	13 pl. Standa rd	9¼	6¼	7½	$1.50
233—	13 pl. Standa rd Long	18¾	3⅛	7½	$1.80
224—	15 pl. Standar d	10½	6¼	7½	$1.60
245—	7 pl. Standar d	11⅛	6¼	7½	$1.60
240—	11 to fit Willar d SJ3	8¼	6¼	8	$1.50
241—	13 to fit Willar M SJ4	9½	6¼	8	$1.50
243—	7 to fit Willard coat SJ26	11¾	6¼	8	$1.60
229—	7 to fit Spec. M ax	11	6¼	7½	$1.60
	Wire Handles, lead c oated			Per pair,	$0.16
	Black Acid Proof Pa int			Per gal.,	$3.50

Type Y



Type S

	Type Y	Type L	Type X	Type S
Thickness	4/32	4/32	3/32	4/32
Width	5⅝	5⅝	5⅝	5⅝
Height	4¾	4⅛	4¾	5¾
Exide			X	
Willard	SL-LBA	SM-SLB	SX	SJ
U. S. L.	CD	AD	WH	JF
Prestolite	RH	SW	SE	
Columbia	SL	BL	ES	
Gould	AL	LL		
Phila.	LM	L		
Vesta				
Type Y				
Type L				
Type X				
Type S				

Battery Plates

Split

Made of Re ted, will fit ts.

Packed in B

6—Positive . . . Packed in B . . . . . Per 100, $52.00

—Negative . . o. 51—Positive . . . . . Per 100, $48.00

o. 41—Negativ . . . . . Per 100, $52.00

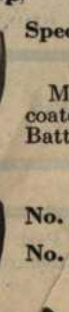
Battery Sep arators

Height ins.	Width ins.	Per 100
4½	x 5⅞	$4.80
5⅛	x 5⅞	$4.80
5⅛	x 5⅞	$4.80
5¼	x 5⅞	$4.80
5⅛	x 5⅞	$4.80
5½	x 5⅞	$5.00
5⅝	x 4⅜	$5.00

Special Clam Glass Co

Made of R coated. Ca Battery, all

Pack



Rub-Tex Battery Vent Plugs

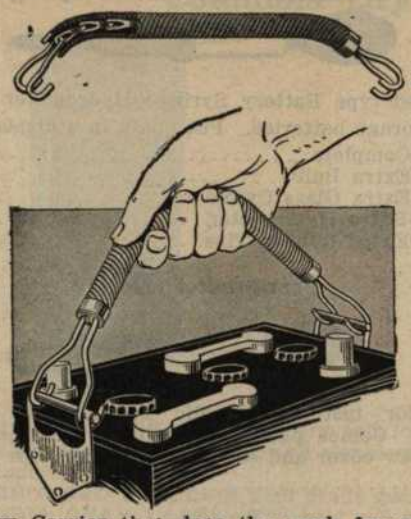
No. 55

No.

Made in standard sizes of Rub-Tex material. Impervious to the action of heat and cold and not brittle as hard rubber.

	Per 100
No. 625—With Splash	6.25
No. 550—Without Splash	5.50

American Battery Carriers*



A Battery Carrier that does the work for which it is intended. It is flexible and can easily be hooked on to the battery even when located inconveniently low in the car.

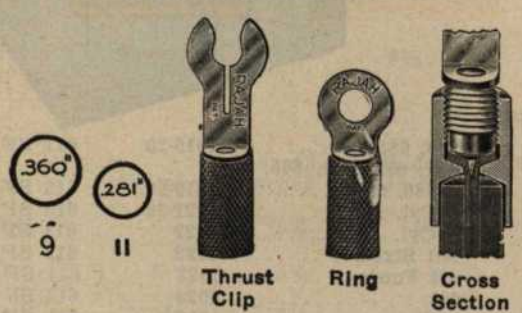
A Carrier upon which all the necessary pull can be exerted from any direction to conveniently lift the battery out of the box.

It overcomes most of the difficulties that have been experienced by the service stations that have been handling batteries. It will save time and inconvenience around the garage.

Built of heavy chain with rugged hooks. The chain is covered with a heavy woven cord shield, amply protected from the acid at the ends by galvanized ferrules. It can also be used for carrying other heavy articles. Length over all 16 inches.

American Battery Carrier.....Each, $0.50

Rajah Solderless Terminals



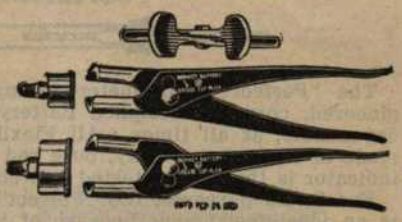
Very simple to attach and make a positive connection. The wire is simply stripped about ⅛ inch and inserted into the ferrule with the bare wires extending through the hole. The clip end is then screwed in and the point will spread the strands evenly and bind them securely against the shoulder. Regularly carried in stock in Thrust Clip and Ring types with either No. 9A or No. 11 sizes of ferrules. We can also furnish other types of terminals and other sizes of ferrules on special orders, at proportionate prices.

No. 9AT—Thrust Clip with No. 9 Ferrule....Each, $0.10
No. 11AT—Thrust Clip with No. 11 Ferrule....Each, $0.10
No. 9AR—Ring with No. 9 Ferrule.....Each, $0.08
No. 11AR—Ring with No. 11 Ferrule.....Each, $0.08
Packed 50 in a box.

Perfection Battery Connectors

No. 10—As illustrated. .....Per 100, $5.00
No. 11—Same as No. 10, except only single end in place of clips.....Per 100, $2.40
Packed 100 in a box.

Battery and Grease Cup Pliers



Teeth are cross milled in double concave jaws. Rivet slides between two holes and operates on either side. Garage men find two of these pliers exactly right for gripping battery posts and terminals. Made from drop-forged steel, 9 inches long.

Battery and Grease Cup Pliers.....Per doz., $26.40
Packed 1 in a cardboard box, 6 in a carton.

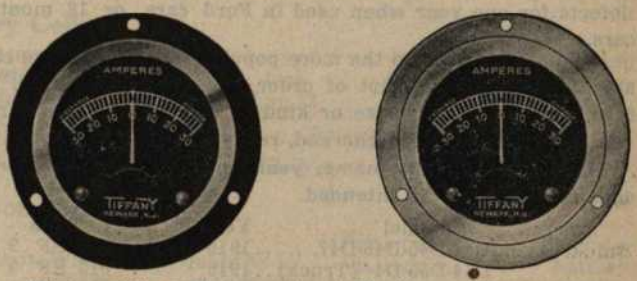
Universal Battery Clips

For use as a quick and ready means of connecting storage batteries for charging. Also excellent for Radio use.
Fitted with copper shunts to protect the spring.
Lead-coated to resist acid fumes.

No.	Ampere capacity	Spread of jaws	Price each
11-A	100	1 inch	$1.10
21-A	35	1½ inches	$0.40
24-A	15	1 inch	$0.30
33-A	200	2 inches	$2.70

Packed 10 in a box.

Universal Dashboard Ammeter



Give quick and accurate indications. Ruggedly constructed to withstand severe vibration and service conditions. Cases are of brass; heavy horseshoe magnet. Terminal screws rigidly secured to prevent twisting. Range in amperes 30-0-30. Dials are of white letters and figures on blackground.

Style A, Nickel Finish. Diameter of case is 2 inches. Outside diameter of flange 2⅝ inches. Flush mounting.

Style A Dashboard Ammeter.....Each, $1.50

Style B, Black Enamel Finish, with nickel bezel. Outside diameter of flange 2⅝ inches; diameter of case 2 inches. For flush mounting.

Style B Dashboard Ammeter.....Each, $1.50
Packed 1 in a box.

Copper Terminals*

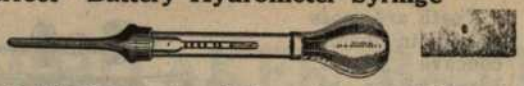
No.	For	Per 100
1	Small Primary	$0.84
1½	Regular Primary	$1.15
2	Magneto Secondary	$1.45
3	Large Secondary	$2.30

Copper Terminal Assortment

Contains 100 assorted Nos. 1, 1½, 2 and 3.

No. 782 Assortment. .....Each, $1.80

"Perfect" Battery Hydrometer Syringe



The "Perfect" Hydrometer Syringe is a carefully engineered, correctly designed Battery Tester; one that is dependable, at all times. All Flexible Rubber Parts are made of the finest quality, pure red rubber. The float or indicator is thoroughly tested and accurate.

For Radio purposes, the "Perfect" Hydrometer Syringe is an ideal instrument because of its large capacity and slenderness of tip, fitting the many types of Radio Storage Batteries; something the ordinary automobile storage battery syringe will not do. Packed 1 in a box.

Each 75

"Hydro" Battery Filler

A device that is coming into use more with car owners, battery stations, garages, etc. It is very handy for filling distilled water into storage batteries.

Length over all 11 inches.

Bulb has capacity of 8 oz. Is made of good grade black rubber. The stem is of hard rubber.

Packed 1 in a box.

Each 1.00

"Breaknot" Hydrometer Syringe.

Improved type Battery Syringe Hydrometer for use in testing storage batteries. Put up 10 in a display carton.

No. 595—Complete . . . . . Each, 1.00
No. 5B—Extra Bulbs . . . . . Each, .40
No. 5C—Extra Glass Cylinder . . . . . Each, .30
No. 5H—Extra Hydrometer . . . . . Each, .30
No. 5T—Extra Rubber Tips. . . . . Each, .30

Freez-meter Syringe

Used for testing alcoholic solutions in automobile radiators. Comes packed in a strong mailing tube with metal screw cover and complete directions for testing.

No. 959 . . . . . Each, 1.00

Extras for Freez-meter Syringe

No. 9B—Extra Bulbs . . . . . Each, .40
No. 9C—Extra Glass Cylinders . . . . . Each, .30
No. 9T—Extra Rubber Tips . . . . . Each, .30
No. 9H—Extra Floats . . . . . Each, .30

Trojan Storage Batteries

These batteries are the result of years of experiment and study and we are in position to offer a product of high quality.

Only the very best material is used in their construction and will compete with any storage battery on the market.

They are fully guaranteed against all material and mechanical defects for one year when used in Ford cars, or 18 months in other cars.

We show prices on the more popular types, which we can regularly ship promptly on receipt of order. We are in position, however, to furnish you with any size or kind of battery to fit your requirement.

All batteries shipped charged, ready to use.

In ordering specify name, year and model of car for which the battery is intended.

Car	Model	Year	Type
Buick	D44-D45-D46-D47	1916	611 SF 9
	D54-D55-D4 (Truck)	1916	613 SF 9
	All Models	1917-18	611 SF 1
	All Models	1919-20-21	613 SF 1
	All	1922	613 SF 1
	All Fours	1923	611 SF 1
	All Sixes		613 SF 1
	44-50	1924	613 SF 1
Cadillac	All Models	1914-15-16	619 AM 43
	All Models	1917-18-19-20	619 AM 42
	59	1921	619 AM 42
	61	1922-23-24	619 SM 22
Chalmers	All Models	1919-20	613 SF 4
	All	1921	613 SF 63
	All	1922	613 SF 1
	All	1923	613 SF 1
Chevrolet	FB, T	1919-20-21	613 SF 1
	490B, G	1920-21	611 SF 1
	490, G	1922	611 SF 1
	Superior	1923-24	611 SF 1
Dodge	All Models	1915-21	127 SF 31
	All	1922-23-24	127 SF 37
Ford	All Models	1922-24	611 SF 1
Hudson	6-40	1916	613 SF 9
	Super 6, 12-0, 0	1916-21	613 SF 1
Hupmobile	All Models	1918-19-20-21	611 SF 1
	R-6, R	1922-24	613 SF 1
Maxwell	25	1918-19	
		1st lot of 1920	M127 SF 2
	25	2nd lot of 1920	613 SF 61
	All Models but Trk	1921	613 SF 61
	After 300,000	1922	613 SF 61
	All Models	1923-24	613 SF 1
Nash	684, 685	1919-20	611 SF 1
	681, 682, 684, 685, 686, 687	1919-20	613 SF 1
	6 Cyl.	1921-22	613 SF 1
	4 Cyl.	1922	611 SF 1
	All Sixes	1923	613 SF 1
	All Fours	1923	611 SF 1
	691	1924	613 SF 1
Oakland	34C	1919	611 SF 62
	34C	1919	611 SF 12
	34C	1920	613 SF 12
	34C	1921	613 SF 1
	34D	1922	613 SF 12
	6-44	1923	613 SF 5
	6-44	1924	613 SF 12
Overland	4	1916-21	611 SF 10
	20	1920-21	617 SF 2
	4	1922-23	611 SF 10
	4	1924	611 SF 1
Paige	All Models	1919-20	613 SF 16
	6-44, 6-46, 6-42, 6-56	1921-22	613 SF 1
	666	1923	617 SF 1
Studebaker	All Models	1919-20	613 SF 1
	EH, EG	1921	613 SF 1
	EJ	1921	611 SF 1
	Light 6	1920-22	611 SF 1
	Big 6 Spec	1920-22-23	613 SF 1
	Light 6	1923	611 SF 1
	EL6-EK6	1924	613 SF 1
	EM6	1924	611 SF 1
Willys-Knight	20	1922	617 SF 2
	All Models	1923-24	617 SF 1

Type 611 SF . . . . . Each, $24.00
Type 613 SF . . . . . Each, $29.00
Type 127 SF . . . . . Each, $33.00
Type M127 SF . . . . . Each, $34.00
Type 617 SF . . . . . Each, $43.00
Type 619 AM . . . . . Each, $50.00

Columbia Dry Cells and Hot Shot Batteries

COLUMBIA IGNITOR—The best dry cell for general use. Renowned for its long life and excellent service. For gas engine ingition, door bells, buzzers, and signal systems and radio use—in fact, for any service requiring dry batteries. Made in 6-inch size only.

COLUMBIA RED LABEL—A high grade general utility cell. Made in 6-inch size only.

COLUMBIA GRAY LABEL—The best cell for telephone service. Noted for its long life on light drain service. Made in 6-inch size only.

NOTE:—Fahnestock Spring Binding Posts are furnished only when requested, and then only on cells with round jackets. Round jackets are standard and are furnished unless square jackets are specified. Dry cells in square jackets are shipped only in boxes of 50 cells, not in barrels of 125 cells.

COLUMBIA STEEL CASE HOT SHOT BATTERY—For all purposes requiring four or more dry cells in series, Columbia Steel Case Hot Shot Batteries are recommended. It is only necessary to connect two wires to the binding posts and the battery is ready to operate. Columbia Steel Case Hot Shot Batteries are particularly adapted for tractors, small automobiles, motor boats, gas engines, blasting, fire and burglar alarms, gongs, bells, annunciators, signals, small lights for closets, outhouses, camps, etc.

Columbia Steel Case Hot Shot Batteries are composed of specially selected cells assembled in a steel container. All internal connections are made with soldered copper strips and the cells are completely insulated against accidental short circuits. Because of their rugged steel construction they are super-durable and impervious to water. The handsomely lithographed steel case makes them particularly adaptable for very attractive store or window displays.

NOTE:—Only Hot Shot types 1461-M, 1562-M and 1662-M are furnished in the Steel Case construction. Types 1462 and 1561 are supplied in fibre containers.

Columbia Dry Cells

Type	Voltage	Diameter, inches	Height, inches	Approx. weight of Standard pkg., lbs.	Quantity in standard package	Lots of less than 12	Lots of 12 or less than 50	In standard box or bbl. lots
Ignitor Red Label Gray Label	1½	2½	6	Box 120 Bbl. 300	50 125	Prices per hundred cells		
						$85.68	$73.68	$63.68

Columbia Hot Shot Batteries

Type	Voltage	Length, inches	Width, inches	Height, inches	Approx. Weight of standard package, lbs.	Quantity in standard package	Price per battery in boxes or barrels	Price per battery, broken lots
1461-M	6	10⅝	2¾	7½	Box 128 Bbl. 255	12 24	$3.48	$3.68
1462	6	5⅜	5⅜	7½	Box 134 Bbl. 250	12 21	$3.48	$3.68
1561	7½	13¼	2¾	7½	Box 167 Bbl. 225	12 15	$4.16	$4.36
1562-M	7½	8	5	7½	Box 115 Bbl. 260	8 18	$4.16	$4.36
1662-M	9	8	5⅜	7½	Box 136 Bbl. 230	8 13	$4.92	$5.12

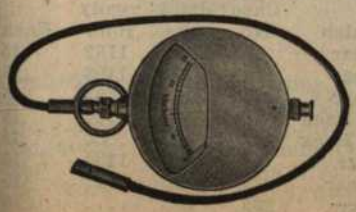
Steel Case Hot Shot Assortments SHS

Contents	Approx. weight of box, packed	Dealer's lot price
6 1461-M Hot Shots (Steel Case) 2 1562-M Hot Shots (Steel Case) 2 1662-M Hot Shots (Steel Case)	123 lbs.	$38.72

Standard boxes or barrels must contain one type of Dry Cell or Hot Shot Battery only, except in the case of the SHS Assortment, which is standard as listed.

Battery Testers

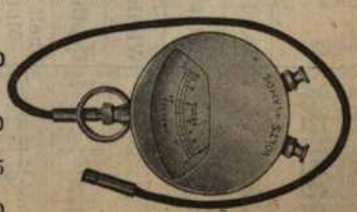
The pointer stops almost instantly at the correct amperage or voltage. Has the lightest moving parts to minimize friction and a strictly high grade magnet of tungsten steel. 2-inch diameter. Packed 1 in a carton.



Ammeter
For Testing Dry Cells. 0-35 Amperes.
No. 1.....Each, $1.30

Voltmeter
For Testing Storage Batteries. 0-10 Volts.
No. 14.....Each, $2.20

Volt-Ammeter
For General Testing. Standard Range, 0-10 Volts, 0-35 Amperes.
No. 4.....Each, $1.80



French Dry Cells and Ray-O-Spark Batteries

FRENCH IGNITION No. 6 CELLS are made for heavy duty, such as gas engine ignition, tractors, motor boats, street car signals, lighting. Flush top carbons only—round or square cartons. They are regularly equipped with standard screw binding posts, but will be supplied with spring clip binding posts on factory shipments only, without extra charge. Initial shipping amperage—30 amperes and above. Not over 10 per cent depreciation in six to nine months.

FRENCH TELEPHONE No. 6 CELLS are designed especially for telephone and light drain service. This cell is the only dry cell made with a protective coating between the zinc can and the active materials—reducing "shelf deterioration" to a minimum, and giving exceptionally long life where the service is light or widely intermittent. Initial shipping amperage—20 to 25 amperes. Because of protective coating feature amperage may drop to from 12 to 20 amperes in cells 60 days old. It remains at this point for a long period, but returns to normal amperage after cell is placed in service. Flush top carbons and round cartons only. Spring clip binding post without extra charge.

FRENCH RAY-O-SPARK MULTIPLE BATTERIES are No. 6 cells assembled into one unit in convenient moisture-proof containers. Each cell is surrounded by a waterproof compound and permanently connected in series by soldered brass connecting strips. To place the battery into service it is only necessary to connect wires to the two terminals.

Ray-O-Spark No. 641 is one of the most attractive multiple Batteries being shown today, with its new container handsomely lithographed in several colors.

Each cell is solidly sealed to the other with a sealing pitch preparation, which makes it absolutely impossible for vibration or accidental concussion to jar loose the cells causing short circuiting and to otherwise interrupt the work of the battery.

Its metal bottom and treated composition sides make it a desirable battery to use wherever there is excessive dampness or water.

They are equipped with a closely woven fabric handle which is anchored securely in the bottom of the inside of the battery between the cells, with pitch.

	No. of Cells	Voltage	Size in Inches, Length	Width	Height	Unit Packages Bbls.	Boxes	Shipping Wt. in Lbs., Bbls.	Boxes	In broken package lots Price per hundred cells	In standard box or bbl. lots Price per hundred cells
No. 6 Ign.	1	1½		2½	6	125	50	285	116	$65.60	$61.60
No. 6 Telo.	1	1½		2½	6	125	50	300	125	$65.60	$61.60
No. 641	4	6	10⅝	2¾	7½	20	12	245	150	$ 3.54	$ 3.34
No. 641B.	4	6	5¼	5¼	7½	20	12	245	150	$ 3.54	$ 3.34
No. 651	5	7½	13	2¾	7½	15	10	225	155	$ 4.16	$ 3.96
No. 651B.	5	7½	7½	5¼	7½	15	10	225	155	$ 4.16	$ 3.96
No. 661B.	6	9	9	5¼	7½	12	8	225	150	$ 4.90	$ 4.70

French "Ray-O-Lite" Batteries

These batteries are sold under a guarantee reading as follows:

This battery has been inspected and tested and leaves our factory in perfect condition. We guarantee that it will give serviceable light longer than any other battery of same dimensions, used under comparable conditions. Should it fail to do this, we will either replace it or return your money.

PERFORATED CASES

No. 1 Cell is a single cell of the same size as used in No. 121. No. 2 Cell is a single cell of the same size as used in No. 221 and No. 231. The regular tubular batteries are made with cardboard cases perforated between the cells. This permits a dealer breaking off one cell at a time if desired, enabling him to carry only one stock and supply the demand for either complete batteries or single cells.

Battery Information

Stock No.	No. of Cells	Size Over All Inches Height	Width	Depth	Shelf Life—Months	Hrs. Continuous Burning	Hrs. Intermittent Burning	For Case No.	Shape	Each
1	1	1⅞	1	.....	6	4½	8	.....	Tub.	.15
2	1	2¼	1⅜	.....	9	12	24	.....	Tub.	.17
121	2	3¾	1	.....	6	4½	8	12	Tub.	.30
221	2	4¾	1⅜	.....	9	12	24	22	Tub.	.35
231	3	7	1⅜	.....	9	12	24	23		
421	2	2¼	1¼	11/16	4	2	4	42		.00
431	3	2¼	2	11/16	4	2	4	43		33.00

Mazda Flashlight Lamps

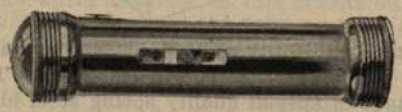
Catalog No.	Volts	Bulb	Finish	For Case No.	Unit Package	Number Ever-ready Bulb	Each
1210	2.3	G-3½	Clear	12	10	1182	.15
2210	2.5	G-4½	Clear	22	10	1198	.15
2310	3.8	G-4½	Clear	23	10	1193	.15
4210A	2.2	FE-3¾	Opal Back	42	10	....	.15
4310A	3.3	FE-3¾	Opal Back	43	10	....	.15
4310	3.3	FE-3¾	Clear	43	10	1181	.15
2360	3.8	G-3½	Clear	235	10	....	.20
2260	2.5	G-3½	Clear	225	10	....	.20

French Ray-O-Lites*

These Flashlight Cases are non-short-circuiting and are equipped with patented features. Each case is thoroughly tested at the factory before being shipped and are guaranteed free from defects. The batteries and bulbs are also of the highest quality in every respect.

Nickel Tubular Cases

No. 12-A —Case and Lamp, 1¼x5 in.....$1.25
No. 121 —Battery, 1x3¾ in.....$0.30
No. 1210 —Mazda Lamp, G-3½—2.3 volt.....$0.15

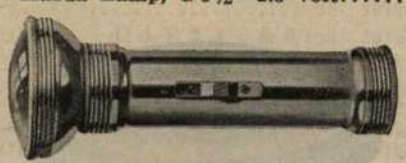


No. 22-A —Case and Lamp, 1½x6½ in.....$1.50
No. 221 —Battery, 1⅜x4¾ in.....$0.35
No. 2210 —Mazda Lamp, G-4½—2.5 volt.....$0.15

No. 23-A —Case and Lamp, 1½x8½ in.....$1.75
No. 231 —Battery, 1⅜x7 in.....$0.50
No. 2310 —Mazda Lamp, G-4½—3.8 volt.....$0.15

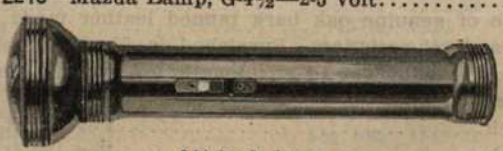
1¾-inch lens.

No. MA-12—Case and Lamp, 1¼x5½ in.....$1.45
No. 121—Battery, 1x3¾ in.....$0.30
No. 1210—Mazda Lamp, G-3½—2.3 volt.....$0.15



2½-inch lens.

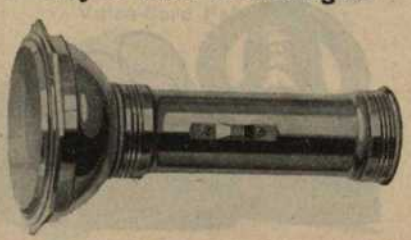
No. MA-22—Case and Lamp, 1½x6½ in.....$2.00
No. 221—Battery, 1⅜x4¾ in.....$0.35
No. 2210—Mazda Lamp, G-4½—2-5 volt.....$0.15



2½-inch lens.

No. MA-23—Case and Lamp, 1½x8½ in.....$2.25
No. 231—Battery, 1⅜x7 in.....$0.50
No. 2310—Mazda Lamp, G-4½—3.8 volt.....$0.15

Ray-O-Lite Searchlights



No. M022 —Case and Lamp, 1½x6½ in.....$2.75
No. 221 —Battery, 1⅜x4¾ in.....$0.35
No. 2210 —Mazda Lamp, G-4½, 2.5 volt.....$0.20
No. M023 —Case and Lamp, 1½x8½ in.....$3.00
No. 231 —Battery, 1⅜x7 in.....$0.50
No. 2310 —Mazda Lamp, G-4½, 3.8 volt.....$0.20

Fibre Tubular Cases

No. 12 —Case and Lamp, 1¼x5 in.....$1.05
No. 121 —Battery, 1x3¾ in.....$0.30
No. 1210 —Mazda Lamp, G-3½—2.3 volt.....$0.15

No. 22 —Case and Lamp, 1½x6½ in.....$1.35
No. 221 —Battery, 1⅜x4¾ in.....$0.35
No. 2210 —Mazda Lamp, G-4½—2.5 volt.....$0.15

No. 23 —Case and Lamp, 1½x8½ in.....$1.50
No. 231 —Battery, 1⅜x7 in.....$0.50
No. 2310 —Mazda Lamp, G-4½—3.8 volt.....$0.15

1¾-inch lens.

No. M-12—Case and Lamp, 1¼x5½ in.....$1.20
No. 121—Battery, 1x3¾ in.....$0.30
No. 1210—Mazda Lamp, G-3½—2.3 volt.....$0.15

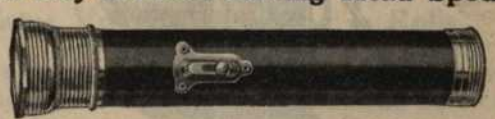
2½-inch lens.

No. M-22—Case and Lamp, 1½x6½ in.....$1.65
No. 221—Battery, 1⅜x4¾ in.....$0.35
No. 2210—Mazda Lamp, G-4½—2.5 volt.....$0.15

2½-inch lens.

No. M-23—Case and Lamp, 1½x8½ in.....$1.75
No. 231—Battery, 1⅜x7 in.....$0.50
No. 2310—Mazda Lamp, G-4½—3.8 volt.....$0.15

French Ray-O-Lite Focusing Head Spotlights



This case is made with a focusing device and a reflector specially designed for spotlight. Can be focused to throw a searching beam for a city block. An extra lamp is regularly included and packed inside the end cap. Two sizes—two and three cells.

No. 23S —Nickel Case with extra Lamp, 3 cell.....$3.30
No. 23FS—Fibre Case with extra Lamp, 3 cell.....$3.05
No. 231 —Battery, 1⅜x7 in.....$0.50
No. 2360 —Mazda Lamp, G-3½—3.8 volt.....$0.20
No. 22S —Nickel Case and Lamp, 2 cell.....$3.05
No. 22FS—Fibre Case and Lamp, 2 cell.....$2.90
No. 221 —Battery, 1⅜x4¾ in.....$0.35
No. 2260 —Mazda Lamp, G-3½—2.5 volt.....$0.20

French Ray-O-Lite Sales Winner Cabinet

The Ray-O-Lite Sales Winner Cabinet is a complete Flashlight Department. With this cabinet Flashlight sales are made easier and more profitable because users knows that batteries bought from the Sales Winner are always fresh, long-burning batteries. Constant national advertising has made it the National Guide to Better Batteries—RAY-O-LITES.

Substantially made, handsomely finished in golden oak or mahogany, glass door and nickel plated metal parts, the Cabinet prompts sales by drawing attention to its orderly display. Its outside dimensions are 12x18x30 inches, and the empty cabinet weighs 50 lbs.

As a sales fixture it is made invaluable by the following exclusive features:

1. For each standard-size battery there is a separate compartment in which batteries are always neatly piled. When a battery is wanted, the small drop-door is opened and, by means of the pull-rod, the battery at the bottom of the pile is taken out. This feature guarantees proper stock rotation and eliminates loss.

2. A battery tester is built in the cabinet. Each size of battery fits in only its proper place in the tester; there is no chance of improper testing and burned out lamps. The lamps are behind the glass of the door and can not be accidentally broken. Every battery is tested with the proper size of lamp.

3. Lamp-bulb renewals constitute a large business for flashlight dealers. To simplify the selling of lamp bulbs, a sliding tray is built in the cabinet, providing space for one hundred and fifty lamp-bulbs of the various sizes. The spaces are properly marked with the number, size and voltage of the lamps so that even an inexperienced clerk can sell lamps without error.

4. The lamp-bulb tester, which is a part of the cabinet, is a very important item to the dealer who wants to satisfy his customers and minimize complaints. With this tester it is easy to test all sizes of lamp-bulbs for flashlights.

This Cabinet is furnished to dealers free of charge with an assortment of rapid selling Ray-O-Lite Flashlights and Batteries. Ask for full information.

No. 10 Delta Lantern

The Delta Lantern is beautifully red enameled, silver plated and nickel trimmings. This Lantern gives three times more light than ordinary flashlights. It will burn continuously by the hour. Uses two common No. 6 Dry Cells, any make.

Lanterns furnished complete, less Battery.

The Handles fold so as to hang flush against wall.

Height 7½ inches.

No. 10—Delta Electric Lantern.....Each, 2.75

Ray-O-Lite Auto Special Flashlight and Holder*

Packed in a beautifully colored display carton. If placed on counter or display case it will sell itself. The clip on holder is made of special quality spring steel highly nickel plated. The holder can be attached under cowl or in any one of several out of way places where it will make the Flashlight instantly accessible, yet prevents its being stolen by thieves. Furnished with either a Nickel or Fibre Ray O-Lite Spotlight. Packed one in a carton.

No. 23-H is a Nickel Plated, 3-cell Spotlight with holder and two round head nickel screws.

No. 23-FH is a Fibre 3-cell Spotlight with holder and two round head nickel screws.

No. 23H —Nickel Case, Lamp and Holder.....Each, $3.75
No. 23FH—Fibre Case, Lamp and Holder.....Each, $3.50
No. 231 —Battery, 1⅜x7 in.....Each, $0.50
No. 2360 —Mazda Lamp, G3½, 3.8 volt.....Each, $0.20

Waterproof Leather Fan Belting

Made of genuine oak bark tanned leather made waterproof and oil resisting. Furnished in 50, 75 and 100 ft. rolls and can be cut to any length for making fan belts for various cars.

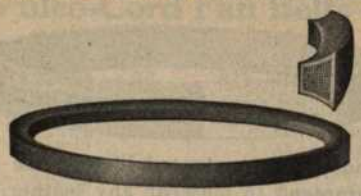
¾-inch.....Per 100 ft., 18.00
1 -inch.....Per 100 ft., 24.00
1⅛-inch.....Per 100 ft., 27.00
1¼-inch.....Per 100 ft., 30.00
1½-inch.....Per 100 ft., 36.00

Ford Leather Fan Belts

These belts are made of a good grade of leather with sewed splices. Will give good service.

No. 3—For Fords, 1916 and previous.....Doz., $7.00
No. 4—For Fords, 1917-1920.....Doz., $5.20
No. 5—For Fords, 1921 and since.....Doz., $5.20

Gates Vulco Cord Moulded V Fan Belts



An endless V Belt that's built like a cord tire has solved the V Belt problem. It has put more miles and more satisfaction into a fan belt than has ever been possible before, and the motorist—your customer—will appreciate this. The Vulco Cord "V" is made endless and is molded to exactly fit the pulley—this means no slip.

Notice the cross section. This shows the cord construction that makes the Vulco Cord Belt non-stretch and almost unbreakable.

Every Vulco Cord Belt carries a printed guarantee of satisfaction to your customer and the largest manufacturers of fan belts in the world are back of this guarantee.

The sizes are standardized the same as the Vulco Cord Flat Belt and one size will fit several different makes and models of cars. Packed 10 in a carton.

No.	Make	Model	Year	Each
701	Chevrolet (P)	FB	1919-22	1.40
	Chevrolet (C)	T-1 ton	1920-22	
	Olds Economy (C)	T-¾ ton	1919-21	
	R. & V. Knight (P)	J "6"	1920-24	
	Samson (T)	M	1919	
	Scripps-Booth (P)	F 43	1921	
	Stephens (P)	Salient "6"	1918-23	
702	Cole "8" (P)	All	1917-24	2.25
	Grant (P)	GX, H	1918-20	
	Oldsmobile (P)	45, 46	1918-23	
	Sheridan (P)	"8"	1920-21	
	Willys Knight (P)	86, 89	1916-19	
703	Grant (P)	TR, TT	1916-17	1.15
	Oakland (P)	32, 34, 34B, 34D 6-44	1916-23	
	Oldsmobile (P)	37, 37A	1917-21	
	Scripps Booth (P)	6-39	1918-20	
704	Acme (C)	A 2 ton	1916-21	2.00
	Day Elder (C)	D 2 ton	1920-22	
	G. M. C. (C)	41, 71, 101	1916-17	
	Velie (P)	38	1917-18	
705	Packard (C)	D & E 3, 4, 5 & 6 ton	1915-24	2.50
706	Acme (C)	B, F, G, 20, 30	1916-24	2.25
	Case (P)	U & V	1918-22	
	Corbitt (P)	E, H	1922	
	Commerce (C)	¾, 1¼, 1½, 2 ton	1917-23	
	Denby (C)	12, 13, 15	1916-20	
	Denby (C)	33, 34, 25	1921-22	
	Diamond T (C)	J-5	1919	
	G. M. C. (C)	15, 16, 25, 30, 31	1916-19	
	Jordan (P)	B, C, F	1916-21	
	Kalamazoo (C)	G-1	1922-23	
	Olds "4"	43 A	1921	
	Republic (C)	10, 11X	1919	
	Velie (C)	46	1919-24	
	Velie (P)	39	1917-19	
	Westcott (P)	C48, D48	1920-23	
	White Hickory (C)	1, 1½ ton	1920-21	
707	Hupmobile (P)	R, R-12	1917-24	1.10
708	Chevrolet (P)	FA	1917-18	1.00
	Chevrolet (P)	490, Superior	1918-24	
	Chevrolet (C)	G ¾ ton	1918-24	
	R. & V. Knight (P)	R "4"	1920-23	
709	G. M. C. (C)	71B, 101B	1918-19	3.50
713	H. C. S. (P)		1923	2.25
	Jordan (P)	MX, H	1922-24	
	Winton (P)	24, 25	1919-22	
714	Marmon (P)	34	1917-19	2.25
715	Westcott (P)	18 & A 48	1918-19	2.25
723	Oldsmobile (P)	47	1922-23	2.25
724	Durant "6"	B 22	1922-24	2.25
	Marmon (P)	34	1920-23	
733	Cleveland (P)	6-40, 41, 42	1919-24	2.25
	Stewart (C)	1, 1½ ton	1918-22	
736	Lexington (P)	T for Gen.	1920-22	2.15
737	Case (P)	W, Y	1922-24	2.40
	Lexington (P)	T for Fan	1920-22	
	Lexington (P)	23	1923-24	
	Moline Knight (P)	B, C. G	1916-17	
740	Reo Six (P)	T 6, U C	1919-24	1.50
747	Packard (P)	Single Six 126, 133	1922-24	2.25
750	G. M. C. (C)	K41, 71, 101	1920-24	2.25
751	G. M. C. (C)	K15, 16	1920-24	2.75
752	Nash (P)	681 & 691 Series	1918-24	2.25
	Nash (P)	41-4	1921-24	
	Packard (P)	Single 6	1920-22	
753	Pierce Arrow (P)	C3, C4, B4	1915-20	2.00
	Pierce Arrow (P)	A4, C6, B5, B6, 32	1917-22	
	Crysler (P)	6	1924	
	Roamer (P)	6-54 E	1919-24	
	Winton (P)	22, 22A	1916-18	
762	Durant "4" (P)	A-22	1922-24	1.50
763	Lincoln (P)	All	1920-24	2.50
767	Samson (C)	15 ¾ ton	1921-22	2.10
773	Maxwell (P)	5	1922-24	1.50
	Samson (T)	M	1920	
774	Oldsmobile (P)	43 A	1922-24	1.50
	Olds Econ. (C)	T	1922-24	
	Rollin (P)	G	1924	
775	Oakland (P)	654 True Blue	1924	1.15
	Rickenbacker (P)	A	1922-24	
778	Olds "6"	30	1924	1.15
782	Chandler (P)	Pikes Peak Mtr.	1924	2.25

(P) indicates passenger car, (C) commercial car, and (T) tractor.

Laminated V Fan Belting

Vulco-Cord Fabric

This belting is built up of sections put together with copper rivets. Put up on reels of 50 or 100 feet with a generous supply of connecting bolts.

½-inch	Per ft.,	.45
⅝-inch	Per ft.,	.50
¾-inch	Per ft.,	.60

Gates Vulco Flat Belting in Rolls

For cars requiring flat open belts and for shaft drives. Gates Vulco-Cord Flat Belting is furnished in 25, 50 and 100-ft. rolls, in any width from ½ to 3 inches. A supply of Alligator fasteners is included with each roll without additional charge—2 inches of fasteners to every 3 feet of belting.

½ inch	Per ft.,	.14	2 inches	Per ft.,	.56
¾ inch	Per ft.,	.22	2¼ inches	Per ft.,	.62
1 inch	Per ft.,	.28	2½ inches	Per ft.,	.68
1¼ inches	Per ft.,	.36	2¾ inches	Per ft.,	.76
1½ inches	Per ft.,	.42	3 inches	Per ft.,	.84
1¾ inches	Per ft.,	.48			

Gates Vulco-Cord Fan Belts

A vulcanizing rubber and fabric belt, made with a patented bias weave construction that insures great strength

Every Gates Vulco Belt is positively guaranteed to outwear any leather, webbing or fabric belt.

The table below shows the proper Gates Vulco Cord Fan Belt for every popular model of any car, truck or tractor that takes a flat belt.

Gates Vulco Flat Belts are packed in cartons—10 belts per carton.

No.	Make	Model	Year	Each
811	Ford (P)	T	1911-16	.50
	National "12" (P)	AK, AM	1917-19	
812	Ford (P)	T	1917-20	.50
	Ford (C)	1 ton	1917-20	
813	Ford (P)	T	1921-24	.50
	Ford (C)	1 ton	1921-24	
817	Bethlehem (C)	GN, HN	1922-24	1.00
	Defiance (C)	B, C, D, E, G	1918-23	
	Kalamazoo (C)	G	1920-22	
	Liberty (P)	10 C, D	1920-23	
	Republic (C)	10, 10E, 11X	1920-21	
	Selden (C)	1½ ton	1919-22	
	Standard (C)	K2½ ton	1920-24	
	Sterling (C)	3½, 5 & 7½ ton	1921-23	
	Stewart (C)	10-3½ ton	1918-22	
	Studebaker (P)	Big 6 & Special Six	1922-24	
	Transport (C)	1, 1½, 2 ton Cont. Mtr.	1919-23	
818	Studebaker (P)	Light Six	1919-24	.55
819	Bethlehem (C)	A, F	1917-18	.75
	Briscoe (P)	4-34	1920-21	
	Denby (C)	25	1919-20	
	Earl (P)	40	1922-23	
	Essex (P)	6	1924	
	Federal (C)	1 ton	1920	
	Hudson (P)	Super Six	1920-24	
	Kissel (P)	Straight Radiator	1920-22	
	Liberty (P)	10 B	1919	
	Signal (C)	M 3½ ton	1918-22	
	Triangle (C)	AA ¾ ton	1918-23	
	Willys Knight (P)	20	1920-22	
820	Allen (P)	43	1919-22	.75
	Buick (P)	"6"	1921-24	
	Buick (P)	"4"	1922-24	
	Hansen (P)	54, 54-60	1920-21	
	King (P)	F, G, H	1919-23	
	Paterson (P)	6-50, 6-52	1921-23	
821	Dixie Flyer (P)	HS-50, 70	1919-23	.75
	Dort (P)	"4"	1921-23	
	Federal (C)	1½ & 2 ton	1918-21	
	Jewett (P)		1922-24	
	Mercer (P)	"4"	1916-23	
	Overland (P)	83B, 83BOE, 85-4	1916-18	
	Overland (P)	90B, 90T after 1st cars	1918-19	
	Pioneer (C)	59 AAA	1920-24	
	Skelton (P)	35	1920-22	
	Butler, Cataract, Henry, Milwaukee, Polar Bear, Sta-Kool Water Pumps for 1921-24 Fords.			
822	Biddle (P)	D, H, B1, B5	1916-22	.75
	Collier (C)	20, 21	1919-22	
	Haynes (P)	60	1923-24	
	Hudson (P)	Super Six	1916-19	
	International (C)	1, 1½, 2 ton	1916-24	
	Nash (C)	2017-18, 3017-18	1917-22	
	National (P)	AF, AL	1917-19	
	Overland (P)	80, 81, 83	1915-16	
	Paige (P)	6-42, 6-44, 6-55	1919	
	Ranger (P)	A-20	1921-22	
	Saxon (P)	"6"	1916-20	
	Star (P)	F	1922-24	
	Stearns Knight (P)	SKL-4	1920-23	
	Transport (C)	20 & 25 Buda Mtr.	1920-23	
823	Chevrolet (P)	490 & FA	1916-17	.45
824	Briscoe (P)	4-24	1916-19	.60
	Crow Elkhart (P)	"6"	1920	
	Dixie Flyer (P)	56	1916	
	Dort (P)	All	1916-20	
	Dort (P)	17A, AS, 12A, AC	1921	
	Elgin (P)		1916	
825	Armieder (C)	HW 2 ton	1916-18	.65
	Auburn (P)	6-39	1918-19	
	Daniels (P)	8-D	1919-20	
	Davis (P)	F, H, J	1916-18	
	Haynes (P)	30 to 55	1915-24	
	Kissel (P)	6-38	1915-18	
	Liberty (P)	10A, 10B	1916-18	
	Moore (P)	C, E, M	1916-19	
	Studebaker (P)	Big & Special Six	1919-21	
826	Davis (P)	71 to 75	1922-24	.75
	Elgin (P)	F, H, K	1917-22	
	Paige (P)	6-46, 51, 55	1916-18	
	Reo "4" (P)	R, S	1915-18	
	Reo (C)	F	1918-24	
827	Buick (P)	E, H, K, 44 to 50	1918-20	.75
	Indiana (C)	2, 2½, 3½ ton	1920-24	
828	Anderson (P)	7W Motor	1916-18	.50
	Commonwealth (P)	42	1920-22	
	Overland (P)	"4"	1920-24	
829	Apperson (P)	"8"	1916-20	1.00
	Famous (C)	B10, B12	1919	
	Fulton (C)	C, D, A	1919-24	
	Tiffin (C)	3½ ton	1921-22	
830	Anderson (P)	400C, AE	1919-20	.80
	Atterbury (C)	2½, 3½ ton	1920-21	
	Auburn (P)	6-39, 6-51	1920-22	
	Beggs (P)	20 T	1920-22	
	Columbia (P)	7 R	1919-23	
	Jordan (P)	M	1919-21	
	Moon (P)	R-20, 6-48	1920-24	
	Nelson (P)	"4"	1916-21	
	ReVere (P)	C, D	1920-22	
	Roamer (P)	4-75E	1919-24	
	Selden (C)	2½ ton	1919-22	
	Signal (C)	F, J, H	1918-22	
	Templar (P)	A 4-45	1920-24	
	Transport (C)	50 & 55 Cont. Mtr.	1919-23	
	Velie (P)	48	1920-21	
	Wescott (P)	B & C 38, A 44	1919-23	
	Witt Will (C)	1 & 2 ton	1918-22	
831	American (P)	B & C	1917-21	.65
	Available (C)	1½, 2½, 3½ ton	1919-20	
	Buick (P)	C24, C25	1916	
	Crow Elkhart (P)	"4"	1916-22	
	Dispatch (P)	All	1915-19	
	Dodge (P)	All	1915-16	
	Netco (C)	D	1919-20	
	Paige (P)	6-36, 38, 39	1916-18	
	Pan American (P)	6-48 6-55	1919-22	
	Paterson (P)	All	1916-19	
	Seneca (P)	L	1917-22	
	Stephens (P)	Salient '6"	1916-17	
	Studebaker (P)	"4" & "6"	1916-18	
	Velie (P)	22, 28	1915-17	
832	Buick (P)	E34, E35	1918	.65
	Buick (P)	D44 to 47	1916-17	
833	Acme (C)	F 1½ ton	1919-24	.75
	Auburn (P)	6-43	1923-24	
	Barley (P)	6-50	1922-24	
	Collier (C)	18, 19	1919-22	
	Columbia (P)	Light Six	1922-24	
	Maxwell (P)	25 (G. & D. Str.)	1915	
	Moon (P)	6-40	1922-24	
	Paige (P)	6-55	1918-19	
	Pierce Arrow (C)	X-3, 2 ton	1915-17	
	Vim (C)	1, 2 & 3 ton	1918-21	

Gates Vulco-Cord Fan Belts—Cont'd

No.	Make	Model	Year	Each
834	Dorris (P)	6-80	1921-24	.75
	Dort (P)	Six	1923-24	
	Grant (P)	H X	1920-23	
	Maxwell (P)	25	1916-17	
	Maxwell (C)	1 & 1½ ton	1917-19	
	Pierce Arrow (C)	X 4-2 ton	1918-19	
	Traffic (C)	All	1920-22	
835	Allen (P)	37, 41	1916-18	.75
	Atlas (C)	21-1	1918-21	
	Bethlehem (C)	D, E	1917-20	
	Buick (P)	D36, 37, 54, 55	1915-17	
	Chandler (P)	All	1916-22	
	Dodge (P)	All	1917-22	
	Dodge (C)		1920-22	
	Elcar (P)	"4"	1920-22	
	Gardner (P)	G, T, R	1920-22	
	Halladay (P)	A-F-22	1922	
	Handley Knight (P)	A, B	1921-22	
	Overland (P)	84	1916	
	Overland (P)	75, 90R, 90T, 1st cars	1916-18	
	Republic (C)	75 ¾ ton	1921	
	Velie (P)	58, 59	1923-24	
	Willys Knight (P)	88-4	1917-19	
836	Apperson (P)	"6"	1916-17	.75
	Dorris (P)	6-80	1919-20	
	Essex (P)	A	1919-23	
	Kissel (C)	¾, 1½, 2, 2½, 3½, 4 ton	1916-18	
	Maxwell (P)	25 (S. & H. Str.)	1915	
	Willys Knight (P)	20A, 64, 67	1923-24	
837	Brockway (C)	R-4, 3½ ton	1921-24	.75
	Brockway (C)	T 5 ton	1922-24	
	Clydesdale (C)	2, 2½, 3½, 5 ton	1919-22	
	Koehler (C)	M 2½ ton	1919-22	
	Maccar (C)	H2, L2, M3	1922-23	
	Maxwell (P)	25	1918-19	
	Moreland (C)	2, 3, 5 ton	1922-24	
	Nelson Le Moon (C)	1½, 2½, 3½ ton	1921-22	
	Pierce Arrow (C)	2, 3½, 5 ton	1920-22	
	Standard (C)	K 3½ ton	1920-24	
838	Bessemer (C)	J-2½ ton	1919-22	1.00
	Chalmers (P)	35A, B, C, 6-30	1916-24	
	Columbia (P)	Reut. Mtr.	1919-22	
	Corbitt (C)	R, B, C	1922	
	Davis (P)	61 to 67	1920-24	
	Gardner (P)	Series 5	1923-24	
	Grant (C)	10, 17A	1918-20	
	National (P)	B-3	1920-22	
	U. S. (C)	K, N, S, NW	1917-24	
839	Reo "6" (P)	M & N	1915-18	.95
840	Acme (C)	C-3½ ton	1917-22	.85
	Anderson (P)	34, 40, 50	1920-24	
	Atco (C)	A-2½ ton	1920-21	
	Capital (C)	G-1½ ton	1921-22	
	Case (P)	X	1922-24	
	Denby (C)	31, 27, 210	1921-22	
	Diamond T (C)	LB, R, 75	1920-24	
	Elcar (P)	6-60	1920-24	
	Jackson (P)	6-38	1920-22	
	Mack (C)	AB	1919-24	
	Menominee (C)	H, HT	1921-23	
	Mercer (P)	"6"	1923-24	
	Mitchell (P)	C, D, E & F	1916-22	
	Moon (P)	6-50	1923-24	
	Noma (P)	2C, 3C	1920-21	
	Oskosh (C)	A, AA	1921-24	
	Paige (P)	6-70, 6-66	1920-24	
	Pilot (P)	6-50	1921-24	
	Republic (C)	19	1920-21	
	Selden (C)	JWB, JCB, ML, DL	1918-19	
	U. S. (C)	H, J	1917-19	
	U. S. (C)	NW, U 1¼ ton	1922-24	
841	King (P)	D & E	1915-16	.65
	King (P)	EE (7 Pass.)	1917-18	
842	Maxwell (P)	25	1920-21	1.00
	Maxwell (C)	1½ ton	1920-21	
	Monroe (P)	M 4	1920-22	
	Wichita (C)	K, L	1920-22	
843	Dodge (P)	with new body design	1923-24	.75
	Gray (P)	R, N, O	1922-24	
912	Acme (C)	E 5 ton	1919-22	1.00
	Fordson (T)		1917-24	
	Garford (C)	68D, 150A	1920-23	
	Gramm B (C)	5 ton	1920-23	
	Kimball (C)	AE, AF	1920-21	
	Nash Quad (C)	4017	1918-22	
	Signal (C)	R-5 ton	1918-22	
	Standard (C)	5 ton	1920-24	
	Stoughton (C)	D-2 ton	1921-22	
	Wilson (C)	1½ & 2½ ton	1921-23	
	Union (C)	JW	1921-23	
921	Hawkeye (C)	N 3½ ton	1920-21	1.25
	Moline Uni (T)	D	1918	
922	Moline Uni (T)	D	1919-21	2.00

(P) indicates passenger car, (C) commercial car, and (T) tractor.

Champney Link V Belting

METAL—LEATHER—FIBRE—BELT

A non-stretchable combination of leather, fibre and metal links, so constructed as to eliminate metal bearing on metal—thereby requiring no lubrication for satisfactory operation.

The Champney Link "V" Belt runs noiseless, but has great strength, is very flexible, and can be easily shortened, as no belt fasteners are required. It will drive when slack—is practically indestructible and answers all requirements of a highly efficient fan or generator drive belt.

Below we give a list showing the size and length required for various makes of cars, trucks and tractors.

CAR	MODEL AND YEAR	Size, Inches	No. of Links
Acme A 2-ton	Truck 1919-20	⅝	26
Acme B 1-ton, F ½-ton	Truck 1920	⅝	29
ABC Starter	C-29	⅝	29
Chevrolet	490 1917-21	⅜	26
Chevrolet	F-2-5-A-F 6-1918-19	⅜	29
Cole	870, 860-1-2-3 1917-18-19-20-21	⅝ HF	33
Garford	77-E	¾	29
G. M. C.	41-22	¾	25
G. M. C.	71-101 until Aug., 1919	¾	27
G. M. C.	71-101 1919	¾	26
G. M. C.	16-21-31 1918-19	⅝	31
Hupp	R 1917-21	⅜	22
Kelly Springfield	K-31 K-32	1	37
Kelly Springfield	K-40 3½ ton K-45 4 ton K-50 5 ton K-60 6 ton	1	41
Kelly Springfield	K-35 2½ ton K-36 Worm	1	38
Locomobile	48-2 1919-21	⅝	40
Locomobile	38-2 1916-17-18-19	⅝	40
Mack Truck	A-C	1	65
Marmon	"34" 1917-18-19	⅝	28
Marmon	"34" 1919-21	⅝	33
Nash	1918-21 Service	⅝ HF	32
Northway (Truck)	2½ ton 1919-21	⅝	30
Oakland	M34-B, M-32 32-C 34-C 32-B 1917-21	1	25
Oldsmobile	44-45-45A-46 1919-21	⅝ HF	33
Oldsmobile Economy Truck	1919-21	⅝	26
Oldsmobile	37 1918-19	⅜	25
Packard	3-A	⅝	36
Packard	D-3-5-4-6	⅝	31
Packard	1–1½ ton 2-ton 4-48 5-48 No. 59051	⅝	29
Packard	2-38 3-38	⅝	30
Packard	3-25 Special	⅝	34
Packard	3-25 Standard	⅝	33
Packard	1-25, 1-35, 2-25, 2-35	⅝	36
Packard	3-35 Twin Six 1919	⅝	34
Packard (109413)	1919	⅝	30
Packard	TC, TD, ADT, 1918	⅝	38
Packard	5-A, 6-A 1918	⅝	49
Pierce-Arrow	5-ton 1919	⅜	33
Reo T-6 U-6	1920-21	⅜	31
Reo T-6 U-6	1918	⅝	41
Samson Tractor	D	⅜	30
Samson Tractor	M	⅜	31

Size. ins.	No. links per ft.	Per ft.
⅜	10	.70
⅝	9	.90
¾	8	1.00
⅞	8	1.20
1	8	1.60

Galvanized Steel Hose Clamps

Quickly removed and put on again, without damage to itself or hose. Tongue slides in channel and cannot dig into the hose.

No.	Size of hose		Diam. of clamp, open	No. in box	Per doz.
20	⅝-in.	2-ply	22/32-in.	48	$0.52
30	⅝-in.	3-ply	24/32-in.	48	$0.52
40	½-in.	4-ply	30/32-in.	36	$0.52
50	¾-in.	3—4-ply	1 8/32-in.	24	$0.52
60	1 -in.	2-ply	1 13/32-in.	48	$0.66
70	1 -in.	3-ply	1 17/32-in.	48	$0.66
80	1 -in.	4-ply	1 18/32-in.	48	$0.66
90	1¼-in.	3-ply	1 23/32-in.	48	$0.80
100	1¼-in.	4-ply	1 28/32-in.	36	$0.80
110	1½-in.	3-ply	2 1/32-in.	36	$0.72
*120	1¾-in.	3—4-plv	2 8/32-in.	24	$0.72
130	1¾-in.	3—4-plv	2 10/32-in.	48	$0.90
140	1¾-in.	3—4-plv	2 14/32-in.	48	$0.90
*150	2 -in.	3—4-ply	2 16/32-in.	24	$0.90
160	2¼-in.	3—4-ply	2 24/32-in.	36	$1.06
180	2½-in.	3—4-ply	3 1/32-in.	36	$1.16
190	2¾-in.	3—4-ply	3 8/32-in.	36	$1.30

Sizes marked * are used on Ford cars.

Erickson Hose Clamps

Made of galvanized soft steel. Draws up evenly and securely, fits connections whether round or oval. Long screws give plenty of adjustment to fit different plys of hose. Packed 50 in a carton.

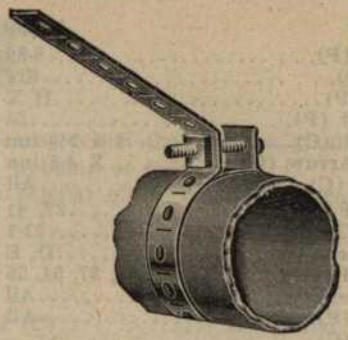
No.	Size, ins.	Per doz.
40	1	$1.30
41	1¼	$1.40
42	1½	$1.50
43	1¾	$1.60
44	2	$1.70
45	2¼	$1.90
46	2½	$2.00
48	2¾	$2.20
49	3	$2.60

Air Hose Clamps

These clamps are made of brass and they insure a neat, positive connection with the hose.

No.	Inside dia., ins., when wide open	Per doz.
100	⅜	$0.60
200	⅜	$0.60
300	½	$0.60
400	⅝	$0.80

Universal Adjustable Hose Clamp



Made from cold rolled steel, electro galvanized, with bolt and nut, also electro galvanized, ready to attach. Adjustable to fit any hose of any size.

The clamp has holes one-half inch apart, with scores between holes to facilitate bending of the clamp with a slight pressure of hand or pliers, forming a seat for the bottom of the nut and permitting any desired adjustment, and providing for a quick clean break-off. A bead on the bolt end of the clamp makes it absolutely leak-proof.

Made in two sizes—Senior from 1 to 3-inch; Junior from ¼ to 1½-inch. The Junior size accommodates tire pump, gasoline pump and other small jobs. Senior will cover every larger size hose requirement. Both sizes may be used in series of any diameter. Packed 50 in a box.

Senior . . . . . Per 100, $10.00
Junior . . . . . Per 100, $10.00

Dural Radiator Hose

No Clamps Needed.

A high-grade, rubber hose with superior heat-resisting qualities. Quickly and permanently attached without clamps. Simply apply white lead or shellac to the ends and slip on. This radiator hose will stay in place. Easy to attach and costs less because no clamps are necessary.

Furnished in two sizes for Ford. No 1 for large upper connection, and No. 2 for small lower connection. A very attractive display card will be furnished with each dozen Dural connections.

Packed one dozen in a box.

No. 1—2 x4¼ inches . . . . . Each, $0.46
No. 2—1¾x3 inches . . . . . Each, $0.40

Radiator Hose for Ford

The Ford car uses two pieces 1¾-inch and one piece 2-inch Radiator Hose. For convenience we furnish these pieces cut to correct length.

Packed one dozen in a box.

No.	Per doz.
3944—1¾x2¾ inch	$1.40
3006—2 x4 inch	$2.30

Gates Vulco Radiator Hose

A cool engine depends on clean water circulation and this depends on a good hose connection. A hose that breaks down inside soon clogs circulation and an overheated engine results.

It's because radiator hose gets all its wear inside and yet does serious damage if it breaks down inside, that Gates Vulco Hose is built with an especially tough rubber lining.

When you sell your customer Gates Vulco Hose, you know he is going to get service and satisfaction from it.

You can serve a customer with this hose in a half or third of the usual time. In every box of Gates Vulco Hose there's a chart, showing the exact size of every hose connection in every model of every car, truck and tractor.

Marked every inch to facilitate cutting required length. Every six inches along the hose length the diameter is plainly stamped. This saves mistakes.

¾-inch diameter to 3-inch diameter are furnished in 3-foot lengths—packed 6 three-foot lengths of a size to the box.

¾-inch	Per foot,	.30
⅞-inch	Per foot,	.35
1 -inch	Per foot,	.35
1⅛-inch	Per foot,	.40
1¼-inch	Per foot,	.40
1⅜-inch	Per foot,	.45
1½-inch	Per foot,	.50
1⅝-inch	Per foot,	.50
1¾-inch	Per foot,	.55
1⅞-inch	Per foot,	.60
2 -inch	Per foot,	.60
2⅛-inch	Per foot,	.65
2¼-inch	Per foot,	.70
2⅜-inch	Per foot,	.70
2½-inch	Per foot,	.75
2¾-inch	Per foot,	.80
3 -inch	Per foot,	.85

We also furnish Vulco hose in cut lengths to fit Ford, Dodge or Chevrolet cars.

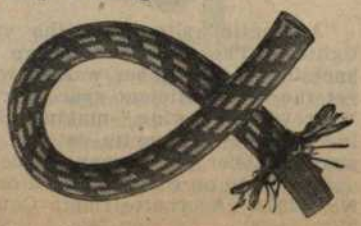
Ford connections are supplied in ready-cut lengths twelve pieces to the box. Dodge and Chevrolet are furnished 10 pieces per box.

Ford Upper, 2x4	Each,	.20
Ford Lower, 1¾x2¾	Each,	.15
Dodge Upper, 1½x7	Each,	.20
Dodge Lower, 1⅜x7¼	Each,	.20
Dodge Upper, 1½x9	Each,	.25
Chevrolet, 1¼x4½	Each,	.20

Tire Pump Tubing

For hand-operated tire pumps. A strongly constructed, oil resisting tube, with a black and yellow braided cover. Furnished in 12-ft. lengths.

⅛-inch....Per ft., $0.10
¼-inch....Per ft., $0.12



No. 55 Garage Air Hose

A moulded hose that will give very good service for the average air line where extreme high pressure is not required.

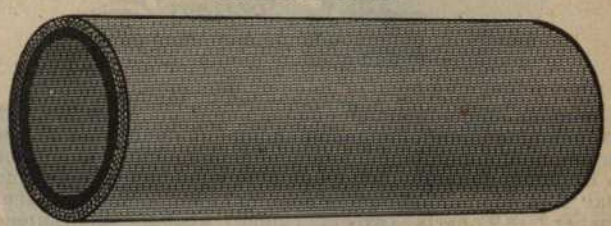
¼-inch....Per ft., $0.36
⅜-inch....Per ft., $0.42
½-inch....Per ft., $0.50

Commander Garage Air Hose

This hose is designed especially for air line service for garages, service stations, etc. A long life, oil and grease resisting hose capable of withstanding heavy pressure. The best for garages and filling stations furnishing air for large trucks. Regularly furnished in 25 or 50-ft. lengths.

⅜-inch....Per ft., $0.44
½-inch....Per ft., $0.50

Radiator Hose



Made especially for automobile radiators. Pliable and easily applied to connections. Carried in stock in 3 ft. lengths. Orders should specify even multiples of 3 feet. Longer lengths can be obtained by shipping direct from factory.

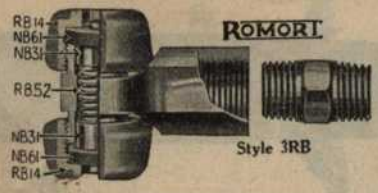
¾-inch, 3-ply	Per ft.,	$0.32
1 -inch, 3-ply	Per ft.,	$0.34
1¼-inch, 3-ply	Per ft.,	$0.42
1½-inch, 3-ply	Per ft.,	$0.50
1¾-inch, 3-ply	Per ft.,	$0.58
2 -inch, 3-ply	Per ft.,	$0.64
2¼-inch, 3-ply	Per ft.,	$0.70
2½-inch, 3-ply	Per ft.,	$0.78

Gasoline Hose

Metal lined and approved by underwriters. One of the most flexible metal lined hose on the market. Asbestos cord packing seals metal lining and the woven cotton jacket provides protection from outside wear. Special couplings prevent leakage. The hose is regularly furnished in 10-ft. lengths without the nozzle.

	Each
No. G1435—10-ft. length ¾-inch hose with couplings	$11.50
No. G1436—10-ft. length 1 -inch hose with couplings	$14.00
No. G1437—10-ft. length 1¼-inch hose with couplings	$17.50
No. G1438—10-ft. length 1½-inch hose with couplings	$21.50
No. G1439— ¾-inch nozzle only	$10.00
No. G1440—1 -inch nozzle only	$11.00
No. G1441—1¼-inch nozzle only	$12.00
No. G1442—1½-inch nozzle only	$14.00

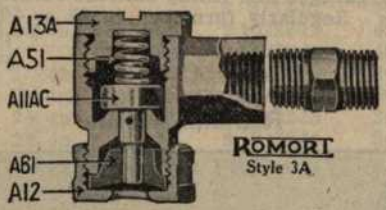
Romort Air Valves



There is a very popular and rapidly growing demand for very small yet efficient automatic air valves. Combined with this demand is that for cushion covered valves that cannot scratch nor mar the finish on disk wheels, automobile bodies, etc. The Type RB Romort Automatic Air Valves are the very latest development and still employ the Romort excellence of construction that is the result of over 13 years of successful manufacturing. A particular feature is the double service construction (making virtually two valves in one) that provides two automatic air outlets. Body measures 1½ inches high. Castings are bronze—parts are made of brass. The caps are covered with a heavy rubber cushion, protecting both the valve and that with which it may come in contact. All parts (except rubber) are guaranteed for one year. In emergency replacement rubber washer may be made from ordinary tire tube. Instantantous in action—users cannot waste air. Packed one in a carton.

No. 3RB.....Each, 1.25

If repairs are wanted, specify by the numbers shown on cut.

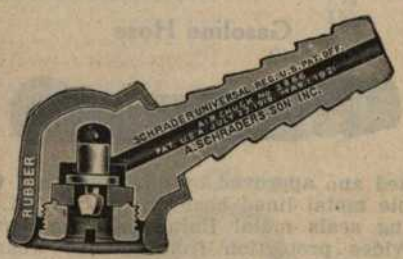


A heavy duty automatic air valve which has met with universal approval for many years. Body measures 1⅝ inches high. Bronze castings and brass parts used. Due to the long stem plunger, this valve operates with an end seal that to its utmost eliminates wear on the rubber washer. All parts (except rubber washer) guaranteed for one year. Every valve is supplied with a short nipple which may be used if desired, thus making the stem connection either male or female—¼-inch iron pipe thread. Packed one in a carton.

No. 3A.....Each, 3.00

If repairs are wanted, specify by the numbers shown on cut.

Schrader Air Chuck



Cannot injure the Tire Valve Inside by bending the pin or distorting the spring. It is absolutely air tight, automatic in operation, small enough for use on all types of wheels, has cured-on rubber cover which protects the mechanism and prevents injury to the paint or enamel on the wheel or fender. Air Chuck with shank for hose, 1 to a box, with 2 extra Rubber Washers. Packed one in a carton.

No. 2866—For ½-inch hose.....Each, 1.25
No. 2867—For ⅜-inch hose.....Each, 1.25

Small enough to use on all styles of wheels and as rugged and substantially built as required for any usage. Body measures 1⅛ inches high, castings are bronze, other parts brass. Instantaneous action and positively air tight. All parts (except rubber washer) guaranteed for one year. No gaskets to wear away, no undue strain on springs or parts.

No 3K Romort Air Valve.....Each, 2.00

If repairs are wanted, specify by the numbers shown on cut.

These are the very smallest high grade air valves upon the market. The general construction is the same as that of the Style 3RB Romort Automatic Air Valves excepting the duplex service feature. The caps are covered with a heavy rubber cushion, protecting both the valve and that with which it may come in contact. All parts (except rubber) are guaranteed for one year. In emergency replacement rubber washer may be made from ordinary tire tube. Body measures 1¼ inches high. Castings are bronze—parts made of brass. Packed one in a carton.

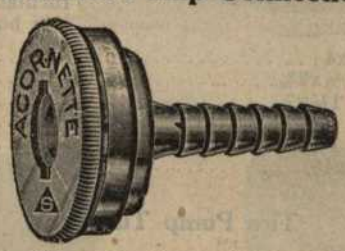
No. NB¼—With stem for ¼-in. I. D. Hose.....Each, 1.00
No. NB⅜—With stem for ⅜-in. I. D. Hose.....Each, 1.00
No. NB½—With stem for ½-in. I. D. Hose.....Each, 1.00

Romort Rubber Washers

Constructed of a special rubber compound, insuring maximum service. Style A61 is for use in Romort Air Valves, style 3A. Style 3K64 for valves 3K. Style NB61 for valves RB and NB. All styles packed 12 in a carton.

No. A61.....Per carton, .30
No. 3K64.....Per carton, .30
No. NB61.....Per carton, .30

Acornette Pump Connections



"Acornette" slips onto the valve easier and grips it tighter. The improved design of its housing prevents buckling of the rubber washer when applied to the valve; yet there is sufficient space for expansion of the washer to prevent "chewing," making it airtight and washer lasting longer. Acornette is the most serviceable of the simple rubber pump connections.

Packed 10 on a display card or 50 in a box.

No. 4739A—Acornette Pump Connection.....Each, .25

Arvin Tire Pump

The Arvin is built to meet the growing demand for a big, worth-while tire pump. Barrel 1½ in. diameter, 24 in. long—a back-saving improvement. Hose ½ in. diameter, 30 inches long. Rectangular shape foot grip. Double leather plunger, built like a locomotive piston. Finished in highest grade chip-proof black enamel, fittings nickel plated. Weight 4 lbs. Packed one in carton for display purposes.

No. 4305.....Each, 4.00

Rose Frictionless Tire Pumps

It will stand more wear and produce more air, with less trouble than any other pump made.

Rose Patent Valve Construction. Has heavy 18-gauge steel cylinder. Packed one in a carton. Six cartons in a box.

No. 193—1¼-inch Cylinder.....Each, 2.50

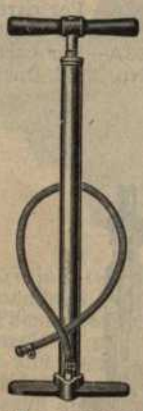
No. 657—1½-inch Cylinder.....Each, 3.00

Special Tire Pump

A 1¼-inch steel barrel folding foot pump. Good grade leather. Will give good service, and is splendid value for the price.

No. 20.....Each, 1.00

Brass Barrel Pump



1¼-inch seamless brass cylinder, 18 inches long. Polished finish. A high grade leather insures good compression. Good hose and connections. A splendid brass pump value.

No. 175.....Each, 2.50

Tire Pump Repairs

The hose is 5-ply, 24 inches long. Is equipped with complete valve connection at one end and hose band at the other for clamping to pump connection. Will fit practically any pump. Packed six in a carton.

No. 245—Tire Pump Hose.....Each, .50

The connection is machined from solid stock. The knurled nut has a die cut fibre washer and requires very little effort to insure a tight joint.

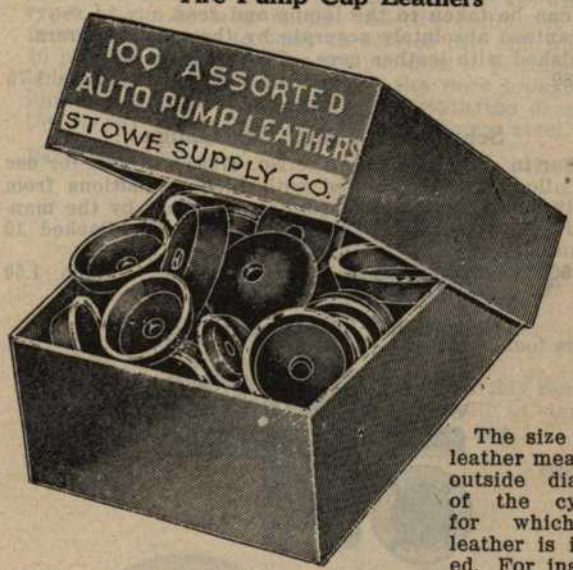
No. 173—Tire Pump Hose Connection.....Each, .15

The Washers are of special tannage and moulded to shape under hydraulic pressure, retaining their shape indefinitely. Packed 24 in box.

No. 086—Washer for 1¼-inch Pump.....Each, .10

No. 087—Washer for 1½-inch Pump.....Each, .10

Tire Pump Cup Leathers



The size of the leather means the outside diameter of the cylinder for which the leather is intended. For instance, our one-inch cup fits a cylinder which is one inch outside diameter.

No.	Size, ins.	No. in box	Full boxes, Per 100	No.	Size, ins.	No. in box	Full boxes, Per 100
30	¾	100	$1.20	35	1½	100	$ 2.20
31	⅞	100	$1.20	36	1¾	100	$ 5.20
32	1	100	$1.60	37	2	50	$ 7.00
33	1⅛	100	$1.80	38	2½	50	$19.00
34	1¼	100	$1.90				

Assortment Tire Pump Cup Leathers

100 assorted; sizes, ⅞ to 2 inches.

No. 40.....Per box, $2.60

Dural Slip-On Dust Cap

An improvement over ordinary dust caps. No twisting or turning to apply or remove. Cannot rust—appearance improves with use. Will not depress valve plunger. Cannot come off in service. Packed one set, 4 in a carton.

No. A—Small size.....Per set (4), .40

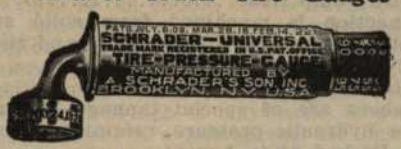
No. B—Large size.....Per set (4), .60

Schrader Universal Tire Gauges

Each gauge in a leather case with snap fastener, so that the gauge can be carried in any pocket or in any suitable place on an automobile without dust or dirt getting into it. Guaranteed absolutely accurate by the manufacturers. Packed 10 in a box.

No. 1561..... Each, 1.35

Schrader Truck Tire Gauges



With Bent Footing for Pneumatic Truck Tires.

Can absolutely be depended upon to give correct pressure. It can be used in the dark, for the indicating sleeve remains in position, showing the exact pressure so that gauge can be taken to the lamps and read.

Guaranteed absolutely accurate by the manufacturers.

Furnished with leather case. Packed 10 in a box.

No. 2789.....Each, 1.75

Schrader Balloon Tire Gauge

Similar in construction to the No. 2789, but built for use with Balloon Tires. Marked with 1-lb. graduations from 10 to 42 lbs. Guaranteed absolutely accurate by the manufacturers. Furnished with leatherette case. Packed 10 in a box.

No. 4866.....Each, 1.50

Schrader Valve Repair Tool

Adaptable to five different uses. Repairs inside thread of valve, repairs outside thread on valve for Valve Cap, smooths down valve cap washer seat on valve, removes or inserts valve inside and deflates tube by screwing deflator into mouth of valve. Packed 10 on counter display board.

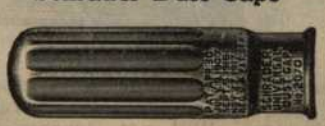
No. 3263.....Per doz., 4.20

Schrader Valve Caps

For automobile tire valves. Packed 5 in a box, 20 boxes to the package.

No. 880.....Per 100, 6.00

Schrader Dust Caps



For use with small diameter automobile tire valves with No. 26 Bushing on No. T777 Valves.

No. T2070.....Per 100, 5.00

Schrader Valve Cores

Packed (5) in a tin box, 20 tin boxes to the package.

No. 4000.....Per 100, 6.00

Schrader Dust Cap and Bushings

This type Schrader Dust Cap slips on over valve stem and screws onto the rim nut bushing. Can be attached or detached with a few turns of the hand, quick acting, saves time when inflating or changing tires. Can be used on any Schrader Universal Tire Valve by removing the old rim nut and screwing on the new rim nut bushing.

No. 3752 is for use with large diameter Valve Stems Nos. 1822, 724, 967, 725 and 792. When screwed tightly with pliers or wrench against felloes of wheels, it holds the Valve Stem rigid. Outer threads permit quick attachment of No. 3751 Dust Caps.

No. 3753 is same as No. 3752 except used on small diameter Valve Stems.

Packed in sets of 5 dust caps and 5 bushings in an attractive orange and blue colored carton.

No. 3752A—Per carton containing 5 No. 3751 Caps and 5 No. 3752 Bushings ..... .50

No. 3753A—Per carton containing 5 No. 3751 Caps and 5 No. 3753 Bushings ..... .50

Schrader Valves

No. T777.....Per 100, 30.00
For tires 3-inch and smaller.

No. T825.....Per 100, 31.00
Same as No. 777, but ½ inch longer.

No. T1822.....Per 100, 31.00
Two inches long from base to end of thread on male, standard for wire wheels.

No. T725.....Per 100, 35.00
For tire 3½-inch and larger.

No. T792.....Per 100, 37.00
Similar to No. T725 except ⅜ in. longer. Intended for demountable rims.

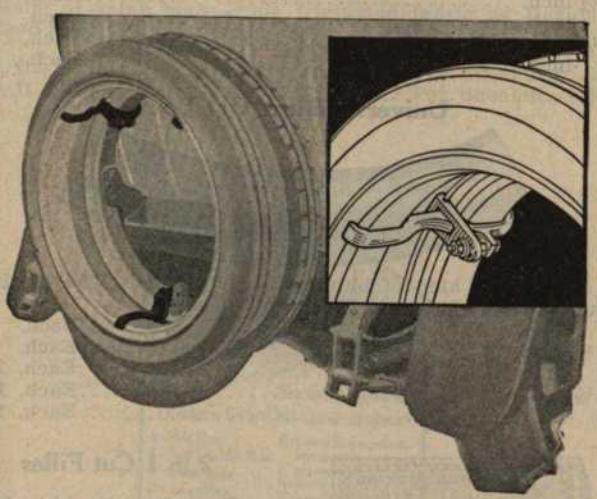
Schrader Universal "Silent Salesman"

Very attractive and unique in appearance. Occupies very little counter space, being only 8¼ inches in diameter. Is a permanent container for all Schrader products. Convenient—no time lost in finding Gauges, Valve Insides, Caps, etc. In addition to the items listed it contains liberal supply of blotters, circulars and booklets for distribution to consumers, as well as a card with retail prices arranged for quick reference. Height, 25¾ inches. Diameter, 8¼ inches. Weight packed, 14 lbs. Contains the following items:

10 No. 1561 Tire Pressure Gauges.
1 No. 2789 Tire Pressure Gauge.
1 No. 4866 Balloon Tire Gauge.
75 No. 880 Valve Caps.
2 No. 3263 Valve Repair Tools.
150 No. 4000 Valve Insides.
5 No. 2070 Dust Caps.
30 No. 3751 Dust Caps with Bushings.
5 No. 3751 Dust Caps only.
1 No. 4790 Star Wrench.
2 No. 2815 Pump Connections.

No. 4657—Schrader "Silent Salesman".....Each, 35.00

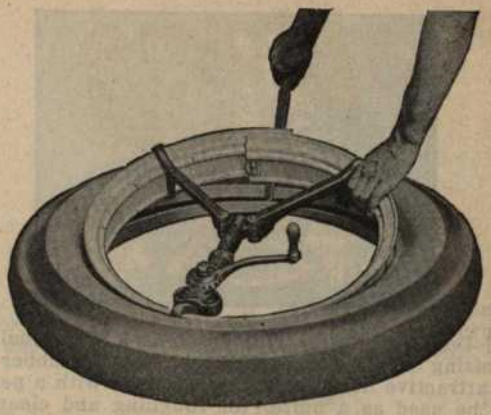
Stone Extra Spare Tire Carrier



The most practical method for carrying two or more spare tires. Consists of three members which are clamped to the regular spare rim. These members automatically lock the extra spare so securely in place that it cannot become dislodged from jolting and bumping. Two or more extra spares can be carried in this manner by the aid of a set of these carriers for each spare tire. Fits any car using the popular type of demountable split rim. Order by rim size. Packed 1 set in a box.

For Rim Size	Per Set 3
No. 3½ SS—3½-inch Straight Side Rims	3.00
No. 4 SS—4 -inch Straight Side Rims	3.00
No. 4½ SS—4½-inch Straight Side Rims	3.00
No. 3½ C —3½-inch Clincher Rims	2.50

Pacific Rim Tool



Quickly adjusted for any size and type of rim, quickly applied—easily operated, and very effective. Operates on Jack Screw principle which is the most powerful means of leverage. The handle will stay set wherever it is left, regardless of the amount of strain on tool, and for this reason it is absolutely safe for anyone to operate, and does not require any patented locking devices. It is simply constructed, and due to the special hooks, the rim does not have to be collapsed as much as with other types of rim tools to change the tire easily. It folds up in convenient size to carry in service car, and weighs but 10 pounds. Because of its compactness it permits the tool being taken to the work and not the work brought to the tool. It is made of malleable iron, with the exception of the screw, which is made of special screw steel.

Pacific Rim Tool.....Each, $10.00

Matchless Tire Tools

Made from one piece of spring tempered tool steel, full polished, with hardwood handle.

This tool is just the size and shape to quickly remove the tire. It is a thoroughly practical tool built to stand hard usage. Length 11½ inches. Packed 4 in box.

No. 39.....Each, $1.00

Tire Carriers for Ford

No. 6 and No. 21

No. 10

Nos. 6 and 21 Carriers will permit limited expansion or contraction. Top bars overlap in center and are fastened with small bolts, allowing adjustment of about 1½ inches. The attachments are simple, but very strong. Intended for carrying tires on side.

No. 6 is intended for 3½-inch passenger car tires, and No. 21 is intended for one 3½-inch and one 4½-inch tire, and especially intended for trucks.

No. 10 will carry two 3½-inch tires. The upper bracket slips over the top edge of the body and is held securely by screws. The lower bracket attaches to running board. Two heavy web straps included.

No. 6A—For one 3½-inch tire.....Each, 4.00
No. 6B—For two 3½-inch tires.....Each, 5.50
No. 21 —For one 3½-inch and one 4½-inch tire.Each, 8.00
No. 10 —For two 3½-inch tires.....Each, 1.50

Bull Dog Never Slip Tire Patch

Bull Dog Never Slip Tire Patch is a high quality self-vulcanizing Tire Patch packed with a good rubber cement in an attractive lithographed tin package with a perforated lid to be used as a buffer for roughing and cleaning the inner tube. This new and original improvement entirely eliminates the use of emery cloth or sandpaper. A very fine plastic-ware dog 14 inches long, 6 inches wide and 16 inches high, a lifelike reproduction of an English Bull Dog, or six pups, if preferable, is given free with an order for six dozen or more Patches. Their use in a window or counter display attract much attention, and greatly increase the sale of Bull Dog Patches. Packed 1 dozen in a carton.

Medium Size (64 sq. in.).....Per doz., $13.00
Small Size (26 sq. in.).....Per doz., $ 6.50

Monkey Grip Tire Patches

Widely known, nationally advertised, Moco Monkey Grip enjoys a nation-wide demand. Motorists know the dependability of Monkey Grip.

National advertising in leading newspapers and magazines and large amounts of direct mail literature sent to car owners create an ever-increasing demand.

A quality product of proven worth, Moco Monkey Grip should be a leader with every dealer.

Packed 1 dozen in a carton.

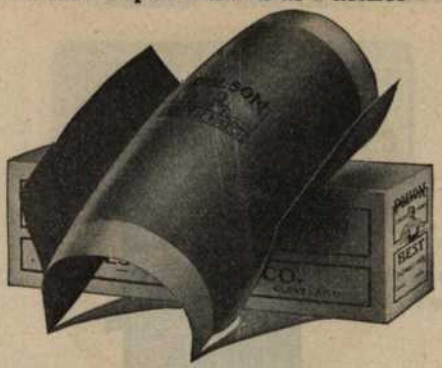
No. 1—Small, contains 27 sq. inches of patch, complete with tube of cement and buffer..Per doz., $ 7.20
No..2—Medium, contains 54 sq. inches of patch, complete with tube of cement and buffer..Per doz., $12.00
No. 3—Large, contains 72 sq. inches of patch, complete with tube of cement and buffer..Per doz., $14.40

Rubber Cement

A high quality, thoroughly reliable product for all kinds of cold rubber patching work. In tubes ¾x4 inches. Packed 1 dozen in a carton.

No. 7711.....Per doz. tubes, $1.20

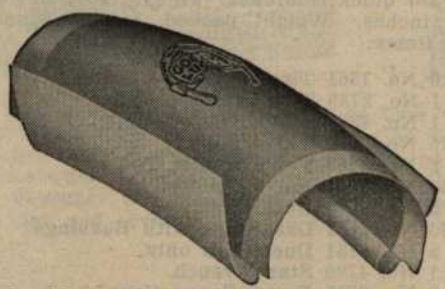
Polson Super Blow-Out Patches



Made of heavy tire fabric and new rubber friction. Red rubber ends extend beyond fabric and prevent pinching of the tube. A real genuine service patch. 4½ and 5-inch sizes packed 5, smaller sizes 10, to a carton.

3 -inch. . . ..Each, .55
3½-inch. . . ..Each, .65
4 -inch. . . ..Each, .75
4½-inch. . . ..Each, .95
5 -inch. . . ..Each, 1.10

Polson Good-Luck Inside Blow-Out Patches



Has red rubber ends and is individually molded to correct form. Made wide enough to fit all tires and constructed to give real, genuine, worth-your-while service. Packed 10 to bundle.

3 -inch. . . ..Each, .35
3½-inch. . . ..Each, .40
4 -inch. . . ..Each, .45
4½-inch. . . ..Each, .55
5 -inch. . . ..Each, .65

Universal Blow Out Boot

Holds any kind of blow out or rim cuts. The original lace boot for blow outs and rim cuts.

3 -inch. . . ..Each, .55
3½-inch. . . ..Each, .75
4 -inch. . . ..Each, 1.00
4½-inch. . . ..Each, 1.25
5 -inch. . . ..Each, 1.50

2 in 1 Cut Filler

A heavy liquid rubber for filling small cuts, bruises and gashes in casings. Dries rapidly and produces a tough, resilient plug that becomes a part of the casing. No cement is needed, as 2 in 1 is applied in one operation. Put up one dozen in a carton containing handsome counter display stand.

1x6-inch Tubes.....
.....Per doz., $6.50

Polson Super Tire Flaps

Made of strong high grade fabric vulcanized to correct form. Is soft and pliable and will not pinch the tube. Packed 5 in a carton.

No. 1—For 30x3½, 31x4 , 32x4½, 33x5	Tires. Each,	.85
No. 2—For 30x3 , 31x3½, 32x4 , 33x4½	Tires. Each,	.85
No. 3—For 32x3½, 33x4 . 34x4½, 35x5	Tires. Each,	.85
No. 4—For 34x4 , 35x4½, 36x5	Tires. Each,	.85

Polson Super Flap in Rolls

Made of same high grade frictioned fabric as Regular Polson Super Flaps. Furnished in 50 and 100 ft. rolls.

50 ft. Rolls	Per lineal ft.,	.07
100 ft. Rolls	Per lineal ft.,	.07

Dobbins Blow-Out Chains

Reinforces the casing and holds the worst blow-out absolutely secure. With each chain we furnish a patch to go on the inside of the casing to keep out sand, dirt, etc. These chains are very easy to attach, and the only tool necessary is a screw driver. Furnished regularly for clincher tires. Packed 1 in a carton.

3 -inch	Each, 1.25
3½-inch	Each, 1.25
4 -inch	Each, 1.50
4½-inch	Each, 1.50
5 -inch	Each, 1.75

Friction Tape

A strictly high grade tape ¾ inch wide, put up in 1, 2, 4 and 8-oz. cartons in very attractive colors, and furnished counter display as illustrated, in quantities shown.

	Quantity in display carton	Per lb.
1-oz. rolls	16	$1.00
2-oz. rolls	16	$0.90
4-oz. rolls	12	$0.90
8-oz. rolls	6	$0.90

Tire Talcum

For automobile, motorcycle and bicycle tubes and casings. Makes tubes slide easily and prevents wear. Use freely because it means economy in the end. Packed in handy sifter top box. 3 dozen in a case. Will not harden or cake.

No. 2136—6-oz. Sifter Top Cans.....Per doz., $2.15

Polson Super-Liner

Made of heavy tire fabric and new rubber friction. Vulcanized on regular tire forms and when cured becomes one piece, very strong, flexible and inseparable. Easily installed and will give splendid service. Packed 1 in a carton.

Size, ins.	Each	Size, ins.	Each
30x3	2.75	36x4	5.55
30x3½	3.05	34x4½	5.70
32x3½	3.45	35x4½	5.90
31x4	4.30	36x4½	6.10
32x4	4.50	37x4½	6.30
33x4	4.80	35x5	6.55
34x4	5.05	37x5	7.00

Floor Brooms

Selected Black Tampico.

Adapted to sweeping sidewalks, stores, garages, factories, etc. Solid red varnished blocks. Two threaded handle holes. Shellac finished handles. Staple set. Oval face. Width 14 ins., length fibre 2⅝ ins. Complete with handles.

No. XY14.....Per doz., $33.00

Palmyra Fibre.

Stiff fibre, heavily filled for sweeping garages, cement or stone sidewalks. Solid natural blocks. Two tapered handle holes. Polished handles. Staple set. Oval face. Width 18 ins., length fibre 4 ins. Complete with handles.

No. 642.....Per doz., $51.50

Mixed Hair Body, Black Horse Hair Casing.

Excellent for stores, garages, sidewalks, factories, rubber mats, runners, households, etc. Light natural varnished blocks. Two threaded handle holes. Polished handles. Staple set. Oval face. Width 16 ins., length hair 2¾ ins. Complete with handles.

No. 532.....Per doz., $38.50

Pure black horse hair. Will give excellent results on smooth wood or tile floors. Solid red polished blocks, 2 threaded handle holes. Staple set, oval face, length of hair 2⅝ inches, polished handles.

No. 14—14-inch.....Per doz., $36.00

Push Brooms

Genuine African bass fibre. Block 16x3½ inches. 5 rows, length of fibre 6 inches. Sweep of broom 22½ inches. Large flare.

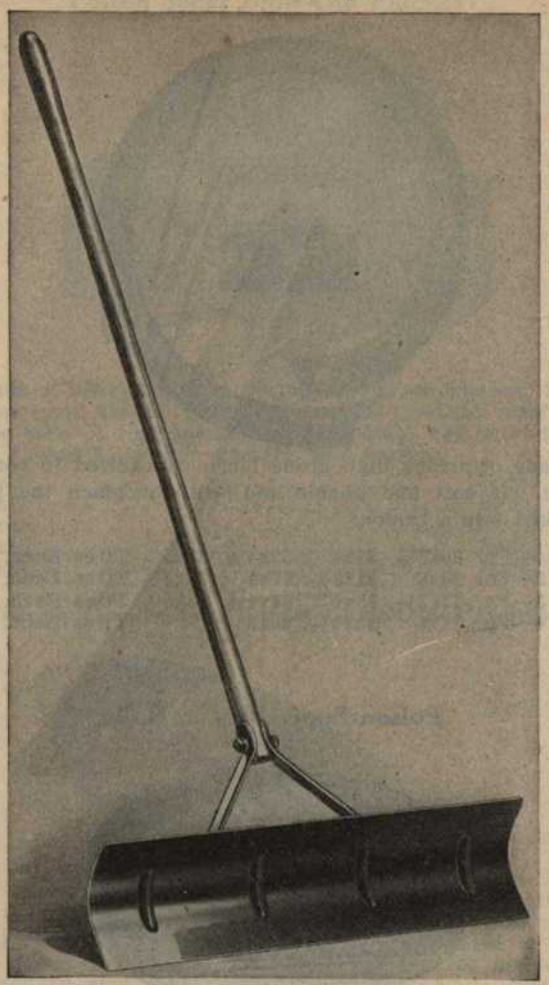
No. 500.....Per doz., $17.00

Curved Back Scratch Brushes

Made of fine round tempered steel wire, and are especially designed for removing paint, varnish, etc., or rust from iron pipe and cleaning threads on pipe or rods. They take the place of No. 0 sand paper. An excellent tool for cleaning and preparing hardwood floors for finishing.

No.	Blocks, ins.	Rows	Length Wire, ins.	Per doz.
1179.....	7x3	9x21.....	1⅛.....	$11.50

Star Floor Scraper

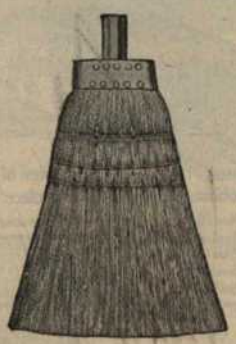


This is a big labor saver. Made of heavy high-carbon steel attached to a long well balanced handle. The handle socket and braces are malleable iron. The blade is reversible. When one side becomes worn, remove the blade, tip it over and it has a new edge. Handle is varnished; blade painted black. Made in two sizes, with 15 or 24-inch blade.

No. 832—15-inch.....Each, $2.40

No. 831—24-inch.....Each, $2.80

Warehouse Brooms



Designed for heavy sweeping in mills, factories, foundries, railroads, warehouses, etc.

Made with heavy bands, also one heavy wire and two twine sewings, which protect the shoulders and prevent their breaking or tearing at this point when used around machinery, etc.

Will last longer than ordinary wire-bound brooms and keep their shape until worn out.

Corn and bamboo mixed, weight 3 lbs.

No. 211S1.....Per doz., $25.20

Wheel Cleaning Brushes

Made of good quality Black hair—especially designed for cleaning and dusting the spokes of automobiles, etc. This brush will clean between both wood and wire spokes.
Brush part 2¾ inches diameter at large end, 1 inch at small end; length over all 16 inches.
No. 717.....Each, $1.50

Fibre Scrub Brushes

Made of stiff Palmetto Fibre. Especially adapted to removing dirt and mud from underneath the fenders. It is also serviceable for various kinds of heavy scrubbing around the car. The brush part is 4x5 in. with 20 in. handle.
No. 417.....Each, $1.00

Fountain Wash Brushes

Made from selected Black Hair, 3½ inches in diameter, which are threaded on the inside to fit any standard hose connection. Water flows out of these brushes through extra holes in the brush part, running down through the hair to the surface to be washed. These are handy brushes for automobiles and other vehicles.
Made from selected Black Hair, 3½ inches in diameter, length of hair 2½ inches. Packed in individual boxes.
No. 720.....Each, $3.00

Steel Wire Cleaning Brushes

Made on solid narrow blocks and are especially suited for getting into places inaccessible to the ordinary type of brush.
Three rows, length of wire 1⅛ inches, block ⅛ inches wide, length of brush part 6 inches, length over all 14 inches.
No. 1777.....Each, $0.46

Made on solid, shoe handle shape blocks. Particularly adapted for removing grease, etc., from around the engine and other working parts of car.
Two rows, length of wire 1⅛ inches, block ⅝ inch wide, length of brush part 5¼ inches, length over all 10 inches.
No. 1784.....Each, $0.42

Shino Polishing Mitten

This mitten slips on the hand like a glove. The soft cotton strings are chemically treated and absorb dust and dirt, leaving a bright, dry finish and polishing the surface. Can be used on upholstery, fenders, body or any part of the car, and in a very few minutes even a large car can be wiped clean. When the mitten becomes dirty it can be washed in warm water and made good as new. Washing does not injure the chemical solution with which it is treated. Each mitten packed in carton.
Shino Polishing Mitten.....Per doz., $9.60

Sponges

Nos. V50 and V75 are velvet sponges of good selection; Nos. K50, K75 and K100 are Cuban Sheepswool, and Nos. Z100 and Z150 are Rock Island Sponges of highest grade. Packed 1 dozen in a box.

No. V50	—Velvet, 50c size	Doz., 6.00
No. V75	—Velvet, 75c size	Doz., 9.00
No. K50	—Cuban, 50c size	Doz., 6.00
No. K75	—Cuban, 75c size	Doz., 9.00
No. K100	—Cuban, 1.00 size	Doz., 12.00
No. Z100	—Rock Island, 1.00 size	Doz., 12.00
No. Z150	—Rock Island, 1.50 size	Doz., 18.00

Chamois Skins

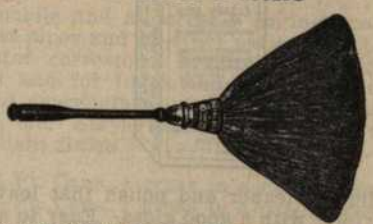
Oil tanned, first quality.

Will wash and dry without hardening.

The stock we furnish are carefully trimmed.

No.	Size. ins.	Doz.
9	16x21	$17.00
12	19x25	$24.00
15	23x26	$30.00

Wool Auto Dusters



Made of strong staple imported wool only, well filled and full length. Dyed fast bright colors. Handles are hardwood enameled black. Threads guaranteed against stripping. Absorb the dust and do not scratch. Can be washed in gasoline or soap and water.

No.	Length Wool	Length Handle	Per doz.
2	8	10	$15.20
4	9	12	$25.60
6	10	12	$30.40

Johnson's Floor Wax

This wax is an ideal polish, and can be used on the finest furniture, as well as on floors. Contains no oil, consequently cannot collect dust and dirt, and does not become soft and sticky. Put up in various size packages to meet every requirement.
½-lb. cans, 48 in a case.....Per doz., $ 8.40
1-lb. cans, 48 in a case.....Per doz., $13.70
2-lb. cans, 24 in a case.....Per doz., $27.60

Common Sense Auto Polish

A greaseless cleanser. Leaves a clear surface that is perfectly dry and does not gather dust.

Common Sense Auto Polish cleans and polishes in one operation. It restores the sparkling factory lustre, and leaves a bone-dry, glass-hard surface that protects the finish against any action of dust, mud, water, etc. Common Sense Auto Polish is prepared to meet out-of-doors conditions and to preserve the finish of motor cars.

6-oz. bottles, 48 in case.....Per doz., $ 7.80
1-pint bottles, 24 in a case.....Per doz., $15.60
1-quart bottles, 12 in a case.....Per doz., $29.40

No. 13 Auto Polish

This is a liquid cleaner and polish that leaves an absolutely dry surface, with a good gloss. Easy to apply. Guaranteed not to injure the finest finish.

4-oz. bottles, 24 in a carton.....Per doz., $ 4.80
12-oz. bottles, 24 in a carton.....Per doz., $ 9.60
1-quart cans, 1 in a carton.....Per doz., $19.20
½-gallon cans, 1 in a carton.....Per doz., $36.00
1-gallon cans, 1 in a carton.....Per doz., $56.00

Dutch Brand Auto Top and Cushion Dressing

Makes old Tops and Cushions look like new. It gives a black, elastic, waterproof finish. Applied easily—dries quickly. Suitable for pantasote, leather or mohair. Makes friends with every car owner. Furnished in 1 pint and 1 quart cans.

No. 2125—1-pint cans, 72 in a case.....Per doz., $15.00
No. 2126—1-quart cans, 36 in a case.....Per doz., $27.00

Simons Kleener

A strictly neutral paste. Contains no Acid, Alkali, Ammonia or Alcohol. Thoroughly cleans and removes all stains, rainspots, scum or oils. Can be used on automobiles or furniture where finish has become dull, with wonderful results. It prepares the finish for Simoniz described below.

Simons Kleener. 24 cans in a case.....Per doz., 7.20

Simons Simoniz

A pure vegetable paste compound. Contains no Acid, Alkali, Ammonia, Alcohol or oils. It provides a hard, dry, velvet-like veneer or coating that protects the finish from rain, mud, dust and other destructive elements. Mud splashes, dust and rain spots can be wiped off with a cloth without injury to the finish.

Simons Simoniz. 24 cans in a case.....Per doz., 7.20

Newtone Automobile Top Dressing

The development of Newtone marks the first radical departure from the ordinary methods of finishing automobile tops. Not a paint or enamel to be spread on with a brush, but a black waterproof liquid which is applied with a small cloth. It does not give the ordinary effect, branded as a refinished top, but brings back the rich, subdued luster and dull gloss of new material. Contains no shellac or acid, and cannot injure the top in any manner. Can be applied to any black top except cloth or mohair.

1-pint cans, 24 in a case.....Per doz., 12.00
1-quart cans, 24 in a case.....Per doz., 21.00
½-gallon cans, 12 in a case.....Per doz., 36.00
1-gallon cans, 12 in a case.....Per doz., 60.00

Blue Ribbon Cream Metal Polish

It can be used to splendid advantage on any metal, or metal parts, and is particularly well adapted for the polishing of brass, copper and nickel. Requires less polish and effort to obtain mirror-like brilliancy, and the lasting quality of the lustre given makes frequent polishing unnecessary.

½-pt. Can, 36 in a case.....Per doz., $ 4.50
1-pt. Can, 24 in a case.....Per doz., $ 8.00
1-qt. Can, 24 in a case.....Per doz., $14.40

Blue Ribbon Cream Nickel Polish

A high-grade polish, prepared especially for use on fine nickel parts and trimmings. Will make dull and dingy metal parts shine like new. Easy to use and satisfactory results guaranteed. Gives a polish that is remarkable not only for its clear brilliancy, but also for its splendid lasting qualities.

½-pt. Cans, 36 in a case.....Per doz., $ 4.50
1-pt. Cans, 24 in a case.....Per doz., $ 8.00
1-qt. Cans, 24 in a case.....Per doz., $14.40

Blue Ribbon Paste Metal Polish

An excellent polish for gold or silverware, brass, nickel, and, in fact, for practically all metals. Immediately dissolves tarnish and does not stick to the surface. Works quicker and easier than the ordinary liquid polishes, without any of the objectionable features that exist in most paste polishes.

2½-oz. Cans, 36 in a case.....Per doz., $1.80
1-lb. Cans, 36 in a case.....Per doz., $5.00

Lightning Metal Polish

Lightning Metal Polish is a cream of unequaled quality and scientifically prepared to quickly produce a brilliant and lasting polish on Nickel, Brass, Silver, Copper and Aluminum; it is also useful for cleaning and polishing all kinds of metal, glassware, porcelain, etc. After polishing with Lightning Metal Polish it leaves a protective film and waterproofing effect, thereby prolonging the life of the lustre and preserving the surface of the material. It has proved most beneficial in cleaning and polishing automobile lamp reflectors without harm to the delicate surface; also eliminates quickly the water and rust spots on Nickel, and after using Lightning it prevents any repetition of the same effect.

½-Pint Cans, 36 in a case.....Per doz., $ 4.80
Pint Cans, 36 in a case.....Per doz., $ 8.00
Quart Cans, 24 in a case.....Per doz., $12.00
Gallon Cans, 6 in a case.....Per doz., $32.00

Dutch Brand Engine Paint

Dutch Brand Engine Paint not only protects from rust, but enables owners to keep their engines neat and clean. It dries hard, smooth and waterproof; is lasting and will not crack nor chip. Put up in economical size for garageman or car owner. State color wanted when ordering.

	Black, doz.	Gray, doz.
No. 2130—½-Pt. Cans, 12 in a case	$ 6.00	$ 9.00
No. 2131— 1-Pt. Cans, 12 in a case	$10.00	$15.00

Dutch Brand Aluminum Paint

For automobile and motorcycle engines, radiators, mufflers, exhaust pipes and all other parts subjected to intense heat or water corrosion Nothing better for protection against rust and for improving the appearance of metal objects of all descriptions, such as hand rails, iron steps, steam pipes, etc. Stays "put" and does not "fly" and produces a brilliant finish.

No. 2132—¼-Pt. Cans, 1 gross in a case...Per doz., $ 5.00
No. 2133—½-Pt. Cans, 1 gross in a case...Per doz., $ 9.00
No. 2134— 1-Pt. Cans, 6 dozen in a case...Per doz., $15.00

"Metalglas" Polish

Effective material for cleaning and polishing nickel, silver, brass, aluminum, side curtains, headlight reflectors, windshields and other glass surfaces. "Metalglas" is a creamy white, non-acidic, non-abrasive and non-inflammable paste compound, non-injurious. Equally effective for all metals.

6-oz. Cans, 1 gross in a case.....Per doz., $4.00

"X" Radiator Liquid

This is a chemical liquid which repairs all radiator leaks permanently in ten minutes. It also loosens all rust or scale in the cooling system. Put up in two size cans. Ford sizes packed 2 dozen in a carton and Standard size packed 1 dozen in a carton. We can also furnish a dealer's display assortment consisting of attractive counter display box, 12 Ford size cans and 6 Standard size cans and 1 Standard can free.

Ford size cans "X" Liquid.....Per doz., $12.00
Standard size cans "X" Liquid.....Per doz., $24.00
Dealer's Assortment "X" Liquid.....Each, $24.00

Dutch Brand Radiator-Seal Compound (Liquid Form)

A radiator liquid compound that performs its function of repairing a leaky radiator rapidly and easily and so permanently that the result is astonishing. This material has the additional quality of eliminating scale and rust from the radiator, thus adding to the life of the car. Also suitable for repairing steam boilers. For Ford and other cars with radiators of two to three gallons capacity, the ½-pint size provides a sufficient quantity for making almost any repair. Packed 1 dozen in a carton.

No. 2137—½-Pint Cans.....Per doz., $7.20

Dutch Brand Radiator-Seal Compound (Powder Form)

No motorist can afford to be without Dutch Brand Radiator-Seal Compound (Powder Form). It guards against road delays and the annoyance and expense of being "towed in" when the radiator springs a leak unexpectedly. A feature of Radiator-Seal Compound is that it is not necessary to drain the radiator when using. It can also be used for repairing cracks in steam boilers. Packed 1 dozen in a carton.

No. 2138—8-oz. cans for large radiators.....Per doz., $7.20
No. 2139—4-oz. Cans for Ford and other small cars.
.....Per doz., $4.00

Dutch Brand Orange Gasket Shellac Solution

Dutch Brand Gasket Shellac is a solution of pure orange shellac, combined with finest Far Eastern Gums cut in 188-proof alcohol. Always ready for use. Cements and makes leakproof metal, leather, cork, paper, asbestos, canvas, fibre, rubber and all varieties of gaskets used in auto, motorcycle and all types of gasoline and oil engines.

No. 2140—2-oz. Bottles with swab, 1 gross in a case.
.....Per doz., $ 2.40
No. 2141—½-Pt. Cans, 1 gross in a case...Per doz., $ 6.50
No. 2142— 1-Pt. Cans, 6 dozen in a case...Per doz., $11.50
No. 2143— 1-Qt. Cans, 3 dozen in a case...Per doz., $21.00
No. 2144— 1-Gal. Cans, ½ dozen in a case....Each, $ 5.50

Dutch Brand Hi-Light Bearing Blue

With the use of Dutch Brand Hi-Light Bearing Blue, it is possible to grind valves and other parts with the highest degree of accuracy. Accuracy in grinding is very important. Close fitting parts very often means a saving of gas and oil, as well as smoother working, longer-wearing machinery. Hi-Light Bearing Blue shows the high and low spots and enables the operator to grind all parts smoothly and accurately. Packed 1 gross tubes in a case.

¾x4 Tubes.....Per doz., $3.00

Rex Anti-Slip Brake Wafers

Prevents auto brakes from slipping and squeaking when the lining has become oil-soaked, water-soaked or worn, and should be used at the first signs of slipping of brakes. Positively non-injurious to the lining; will not glaze or make the brakes grab. They may be used also on cone clutches, fan belts and all friction gripping surfaces. Packed 25 Wafers to a can, 12 cans in an attractive counter display stand.

Rex Anti-Slip Brake Wafers.....Per doz. cans, $7.80

Affinity Soap

Oil, grease, dirt, paint and ink vanish when Affinity Cleaner is used. No water is necessary—simply rub the cleaner on the face or hands. Does not injure the skin.

Affinity Cleaner is used by mechanics, printers, plumbers, etc., in preference to gritty soaps.

Cases of 12 1-pound cans.....Per case, $ 4.30
Cases of 36 1-pound cans.....Per case, $12.00
1-gallon pails.....Each, $ 2.50
25-lb. cans.....Each, $ 6.50
50-lb. cans.....Each, $12.50

Frisko Soap

Frisko is positively not injurious to the most delicate skin, but is very effective in cutting grease and dirt. This is not a grit soap but can be used even on painted or finely varnished surfaces. Also excellent for cleaning woodwork and furniture.

No. 2—32-oz. can, 12 in a case.....Per doz., $ 6.00
No. 5—10-lb. can, 1 in a case.....Each, $ 2.50
No. 6—85-lb. can, 1 in a case.....Each, $16.00

Wiping Rags

Renovated rags. Much more satisfactory than waste for many purposes. Used for grease rags, cleaning, polishing, etc. Put up in 100-lb. bales.

Pure White Rags.....Per 100 lbs., $40.00
Near White Rags.....Per 100 lbs., $36.00
Colored Rags.....Per 100 lbs., $30.00

Swan Brand Automobile Soap

A pure, neutral Linseed Auto Soap, made especially for washing highly finished surfaces. Contains no ingredients whatever which are harmful to paint or varnish. Also makes an excellent cleanser for furniture, woodwork, floors, oil cloth, etc. Simply dissolve enough soap in warm water to make a good suds, wash with sponge or cloth, and rinse.

5-lb. Cans.....Per lb., $0.34
10-lb. Cans.....Per lb., $0.32
25-lb. Cans.....Per lb., $0.30
50-lb. Cans.....Per lb., $0.30
125-lb. Kegs.....Per lb., $0.23
275-lb. Half Barrel.....Per lb., $0.21
480-lb. Barrel.....Per lb., $0.20

Spring Eez

A rust solvent, lubricant and squeak cure. It lengthens the life of springs and causes them to function properly. Cleans and lubricates gun barrels, locks and heavy and light machinery. Softens and revitalizes dried-up greases and gummed oil.

1-Pint Cans, 10 in a carton.....Per can, $1.30
½-Pint Cans, 20 in a carton.....Per can, $0.80

Lightning Penetrating Oil

Recognized by automobile engineers for its excellent penetrating and lubricating qualities. The high quality of graphite used to compound this product makes it a splendid lubricant with sufficient body to give satisfactory and lasting results. Can be used successfully in oil cups, shackles, spring clips, metal joints and working parts of all descriptions. As a penetrating oil, used as a rust and squeak remover, when applied to rusted springs and bolts, bound pistons and valves, rusted farm implements, door hinges, tire rims, also bound and rusted parts of any mechanism, it penetrates instantly, removing the accumulations of rust, and places the inactive parts into proper working condition, also prevents any further formation of rust.

Pint Cans, 36 in a case.....Each, $1.00
Gallon Cans, 6 in a case.....

Dutch Brand Neatsfoot Oil Solution

Softens the transmission linings so that the clutch gets a firm, sure hold. It insures easy "get-aways." It is a practical product that relieves the mechanism of the car from the jars and shocks produced by "leaps" when starting. Cans furnished with spouts. Packed 6 dozen in a case.

No. 2135—½-Pt. Cans . . . . . Per doz., $5.00
No. 2136— 1-Pt. Cans . . . . . Per doz., $8.50

Dutch Brand Soldering Paste

Dutch Brand Soldering Paste acts as a perfect flux, making the solder flow easily and adhere firmly. It protects the surface from oxidation and is non-corrosive. A liquid flux will flow away from the point of application and volatilize when heated. This Soldering Paste remains where applied, and does the work easily and effectively. Packed 1 gross cans in a case.

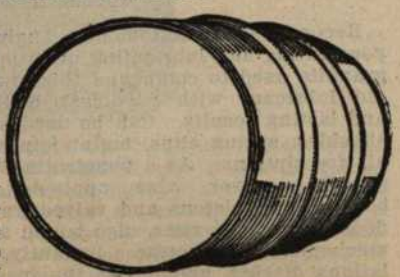
2-oz. Cans . . . . . Per doz., $ 2.50
4-oz. Cans . . . . . Per doz., $ 4.00
1-lb. Cans . . . . . Per doz., $12.00

No. 1 Smooth-On Iron Cement

A quick hardening iron cement for repairing leaks or breaks in iron or steel castings, pipes, furnaces, automobile radiators, etc. Put up in powder form and applied as a putty by mixing with water. 6-oz. packages put up 1 dozen in a carton.

6-oz. package . . . . . Per doz., $7.20
5-lb. package . . . . . Each, $4.40

Denatured Alcohol



Made under rigid inspection of U. S. Government. Three grades. 188 proof formula 5; 188 proof formula 6, and 180 proof formula 6. 188 proof formula 5 is recognized as the best anti-freeze solution on the market for automobile radiators. It positively will not injure the cooling system. Put up in steel drums containing approximately 52 gallons, or in 1-gal. cans.

1-Gallon Cans . . . . . Market
52-Gallon Steel Drums . . . . . Market

Pyrene Fire Extinguisher

Pyrene Extinguisher With Bracket

Pyrene Recharge One-Quart Can

The double-acting pump throws a steady, continuous stream, no matter in what position the extinguisher is held. The contents will not freeze at 50 degrees below zero. Needs no recharging until used.

For automobile, truck or tractor protection Pyrene is best, because it is light and compact. Is not affected by jolting of the car, and is the most effective type for extinguishing gasoline or oil fires. Automobile fire insurance is reduced 15 per cent by the installation of a Pyrene Extinguisher.

Pyrene is the only safe type of extinguisher to use on electrical fires, of all kinds. The liquid is non-conductive and will not injure electrical equipment.

For fires starting in oil, paint or other highly inflammable materials, Pyrene is the ideal extinguisher because it has an instantaneous effect on the flame—smothering the fire like a blanket.

Pyrene is an excellent extinguisher for protection of schools and homes, being light enough to be easily handled by women and children, and the liquid will not injure delicate fabrics.

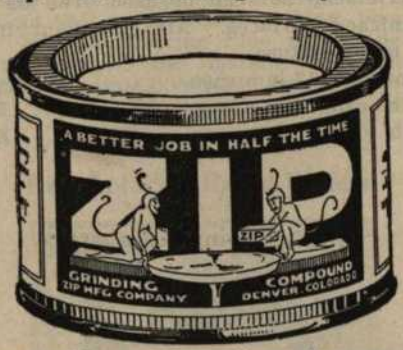
Labeled by the Underwriters' Laboratories, Inc.

Use only Pyrene Liquid in Pyrene Extinguishers. Other liquids may damage the mechanism.

Extinguishers are packed 12 to a case; Pyrene Liquid, quarts, 20 to a case.

Brass Extinguisher, complete with bracket. . . . . Each, 10.00
Pyrene Liquid. . . . . Per quart, 1.75

Zip Valve Grinding Compound



Zip stays on the seat regardless of pressure used or even if valve is turned in one direction without raising. It is impossible to ring or score a valve with Zip.

Zip is especially recommended for lapping because it saves time and will not imbed in the pores of the cylinder. Water positively will remove every particle of abrasive.

In Zip a non-lubricating, chemical binder is used in place of grease. In using Zip, it is only necessary to wipe the valve and seat with damp waste before and after using.

Put up in ½ and ¼-lb. tins.

The ¼-lb. tin is only put up in "Medium" because this grade is best suited for the average car owner.

½-lb. tins contain Fine, Medium or Coarse.

In ordering ½-lb. cans, specify grade wanted.

Packed 12 in a carton.

No. Z1—¼-lb. cans, medium . . . . . Each, .50
No. Z2—½-lb. cans, fine . . . . . Each, .75
No. Z3—½-lb. cans, medium . . . . . Each, .75
No. Z4—½-lb. cans, coarse . . . . . Each, .75

Clover Valve Grinding Compound

Clover Compound may be used in many ways, such as grinding valves, lapping pistons into cylinders with rings in place, grinding crank shafts into bearings, running together gearing, both steel, cast iron and bronze, and all kinds of surfacing and polishing.

Duplex cans contain half each of fine and coarse, and are packed 12 in a case.

No. 3T—Trial Size Duplex Cans.....Each, .30
No. 3C—4-oz. Duplex Cans.....Each, .50
No. 3AF—1-lb. can, very fine.....Each, 1.50
No. 3A —1-lb. can, fine.....Each, 1.50
No. 3B —1-lb. can, medium fine.....Each, 1.50
No. 3MC—1-lb. can, medium coarse.....Each, 1.50
No. 3D —1-lb. can, coarse.....Each, 1.50
No. 3E —1-lb. can, very coarse.....Each, 1.50

Carborundum Grease Mixed Valve Grinding Compound

Carborundum Grease Mixed Valve Grinding Compound is a mixture of the hard, sharp, fast cutting carborundum grains and a high-grade grease. It is made in the coarse, medium and fine mixtures and it quickly cuts the carbon, giving the valve a true, clean seat. The coarse or the medium compound is for roughing in the valve and the fine for polishing the valve. The handy combination can carries both the fine and the coarse compound in separate compartments. It is mighty handy for the car owner. Combination cans packed 12 in a case.

No. 277—Combination can.....Each, .50
No. 360—1-lb. can, fine.....Each, 1.50
No. 361—1-lb. can, medium.....Each, 1.50
No. 362—1-lb. can, coarse.....Each, 1.50
No. 363—5-lb. can, fine.....Each, 6.25
No. 364—5-lb. can, medium.....Each, 6.25
No. 365—5-lb. can, coarse.....Each, 6.25

Carborundum Water Mixed Valve Grinding Compound

For those who prefer to work with greaseless valve grinding compound the Carborundum Water Mixed Compound is recommended. It is extremely fast cutting and leaves a clean uniform unscored valve. Carborundum Water Mixed Compound is put up in handy combination cans carrying coarse and fine compound. Packed 12 in a case.

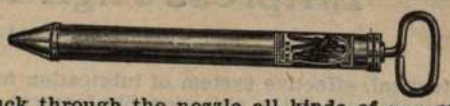
No. 366—Combination can.....Each, .50

Carborundum Valve Grinding Compound in Single Tubes

The Carborundum Grease Mixed Compounds, coarse, medium and fine, are also put up in single collapsible tubes and the tubes are very convenient for both garage workers and for the car owner. Packed 12 in a carton.

No. 357—Carborundum Compound, fine.....Per tube, .25
No. 358—Carborundum Compound, medium..Per tube, .25
No. 359—Carborundum Compound, coarse...Per tube, .25

Rose Grease Guns



Will suck through the nozzle all kinds of oils and some grades of hard grease, but will fill easily and quickly with the hardest grease after nozzle has been removed.

No.	Outside dia., ins.	Length, ins.	Wt., lbs.	Cap., lbs.	
10	1¼	12	1¼	¼	Each, $2.00
20	1½	19½	2	1	Each, $3.00
30	1½	24½	2½	1½	Each, $3.80

Universal Grease Gun

Barrel is steel tubing 9 inches long. Caps and Spout are brass, nicely finished. Capacity 8 oz. either grease or oil.

No. 4161.....Each, $1.00

For large Garage Grease Guns, see Index.

No. 5739 Oil Cups (Wick Feed)

Especially designed for lubricating Automobile Steering Spindles. The revolving cover is oil-tight and dust-proof and a spring prevents it from jarring open. Made of steel nickel plated.

No.	Outside Diam.	Height over all	Pipe Thread	Doz.
000	1 in.	2 in.	⅛ in.	$6.40
00	1 5/32 in.	2 5/16 in.	⅛ in.	$7.00

Spring Cover Oil Cups

Style A Style B Style N Style D

Nickel Finish.

No.	Diam of Cap	Pipe Thread	Doz.
4, Style A.	9/16-in.	⅛-in.	$2.50
3, Style B.	7/16-in.	⅛-in.	$2.00
4, Style B.	½-in.	⅛-in.	$2.50
3, Style N.	½-in.	⅛-in.	$2.20
4, Style N.	9/16-in.	⅛-in.	$2.70
3, Style D.	7/16-in.	⅛-in.	$2.00
4, Style D.	½-in.	⅛-in.	$2.50

No. 118 Hinge Lid Oil Cups

Nickel Finish.

No.	Outside Diam.	Pipe Thread	Doz.
4	9/16 in	⅛ in.	$1.80
6	¾ in.	⅛ in.	$2.70

No. 116 Elbow Hinge Lid Oil Cups

Popular for use on Spring Shackles in place of grease cups. Nickel finish.

No.	Outside Diam.	Pipe	
4	5/8 in.	⅛ in.	$2.60
6	7/8 in.	⅛ in.	$3.90

Empress High Pressure Lubricating System

FOR ALL MOTOR CARS AND TRUCKS

A practical, effective system of lubrication for the chassis which satisfactorily meets all requirements and at the same time eliminates all of the objectionable features of the systems now in use. One hand operates it. Effectively handles all grades of grease or oil. Pressure or gravity system. Convenient to handle, simple to operate. Cleans and lubricates. Quick. The entire chassis can be lubricated in less time than by any other similar system.

Ample pressure is developed in the gun before applying the gun to the connection; when the nozzle is inserted into the connection, a valve in the nozzle automatically releases the pressure and the resulting explosive action forces a charge of the lubricant into the bearing under high pressure.

The Empress connections are fitted with a spring cover easily snapped open with the gun nozzle. The caps revolve, being readily turned to facilitate lubricating from any position.

No easily mislaid removable dust caps to be taken off. No open check valve connections to clean each time the lubricant is applied. The caps are always with the connections, being easily opened and closed without mutilation.

With other systems, two hands are absolutely necessary to perform the operations required to lubricate—attaching the gun to the connection, screwing down the plunger to force the lubricant to the bearing and disconnecting. With the Empress High Pressure Lubricating System there are no connections to be made and disconnected and the pressure necessary to force the lubricant into the bearing is built up in the gun before applying to the connection.

Sturdy of construction, mechanically perfect and practical of design, the Empress Gun will continue to function perfectly under long and hard service. All parts are as nearly accident proof as possible; each part is well made, accurately finished and carefully assembled.

Simplicity of design eliminates the parts usually a source of trouble and annoyance; no hose to break or adjustable nozzle to develop leaks through wear. The Empress Gun opens for filling at the upper or handle end; the lower end or head is made in one solid piece, eliminating the danger of leakage certain to occur in a gun with a threaded removable head.

We can furnish Adapters so that these connections can be fitted to practically any position on any car.

No. 400. The Empress Gun is 15 inches long over all, handle extended. Body 6 inches long. Finished in dull nickle plate. Grease or oil capacity 8 ounces.

No. 400 ..... Each, 6.00

No. 410 Straight Connection

No. 412 90 Degree Connection

No. 414 45 Degree Connection

Connections

Number	Thread	Price Each
410-A, Straight	⅛" Pipe	.30
410-B, Straight	⅛" Female	.30
410-C, Straight	¼" Pipe	.30
410-D, Straight	$\frac{5}{16}$"-32 U.S.F.	.30
410-E, Straight	⅜"-24 U.S.F.	.30
410-F, Straight	¼"-32 U.S.F.	.30
410-G, Straight	¼"-24 U.S.F.	.30
411-A, Str. Ball Check,	⅛" Pipe	.40
411-D, Str. Ball Check,	$\frac{5}{16}$"-32 U.S.F.	.40
412-A, 90° Elbow	⅛" Pipe	.50
412-B, 90° Elbow	⅛" Female	.50
412-C, 90° Elbow	¼" Pipe	.50
412-D, 90° Elbow	$\frac{5}{16}$"-32 U. S. F.	.50
413-A, 90° Elbow, Ball Check,	⅛" Pipe	.60
414-A, 45° Elbow	⅛" Pipe	.55
414-C, 45° Elbow	¼" Pipe	.55
414-D, 45° Elbow	$\frac{5}{16}$"-32 U. S. F.	.55
415-A, 45° Elbow, Ball Check,	⅛" Pipe	.65
416, Spec. 90° El. 7/16"-20 Fem (Ford)		.54

For use on the water pump or places where the lubricant is likely to throw out due to centrifugal force the connections are fitted with ball checks (inside). With oil, ball check connections must be used when the connections are placed in horizontal or inverted positions.

No. 426 Adapter (Female)

No. 427 Adapter (Male)

No. 445 Extension Nipple

No. 446 Bushing

No. 447 Coupling

No. 448 Elbow

Bolt Adapters (Female)

426- 3, ¾" Diam. x 20 Thd	.15
426- 4, ¾" Diam. x 24 Thd	.15
426- 5, $\frac{13}{16}$" Diam. x 18 Thd	.15
426- 6, $\frac{13}{16}$" Diam. x 20 Thd	.15
426- 7, $\frac{13}{16}$" Diam. x 24 Thd	.15
426- 8, ⅞" Diam. x 18 Thd	.15
426-10, ⅞" Diam. x 24 Thd	.15
426-12, 1" Diam. x 20 Thd	.15
426-13, 1" Diam. x 24 Thd	.15

Bolt Adapters (Male)

427- 1, $\frac{5}{16}$" Diam. x 28 Thd	.15
427- 2, ¾" Diam. x 18 Thd	.15
427- 3, ¾" Diam. x 20 Thd	.15
427- 6, $\frac{13}{16}$" Diam. x 20 Thd	.15
427- 7, $\frac{13}{16}$" Diam. x 24 Thd	.15
427- 9, ⅞" Diam. x 20 Thd	.15
427-11, .9025" Diam. x 20 Thd	.15
427-13, 1" Diam. x 24 Thd	.15
427-14, 1⅛" Diam. x 20 Thd	.15

Extension Pipe Nipples

445-1, ⅛" Pipe x ¾"	.15
445-2, ⅛" Pipe x 1"	.16
445-3, ⅛" Pipe x 1½"	.18
445-4, ⅛" Pipe x 2"	.20
445-5, ⅛" Pipe x 3"	.20
445-6, ⅛" Pipe x 4"	.22
445-7, ⅛" Pipe x 5"	.22
445-8, ⅛" Pipe x 6"	.24

Bushings

446-1, ⅛" x ¼" Pipe	.10
446-2, ⅛" x ⅜" Pipe	.15
446-3, ⅛" x ½" Pipe	.18
446-4, ⅛" x ¾" Pipe	.20

Couplings

447-1, ⅛" x ⅛" Pipe	.18
447-2, ⅛" x ¼" Pipe	.20

Elbows

448-1, ⅛" x ⅛" Pipe	.15
448-2, ⅛" x ¼" Pipe	.20

In ordering single systems, specify the make, model and year of car it is intended to fit, and we will then be sure of sending the proper connections, and adapters.

Empress High Pressure Lubricating System Display Case

This display case provides the dealer with an assortment of Empress Nipples and Guns, arranged in a compact and accessible form, sufficient for three cars or trucks, on a reasonable investment. The assortment contains:

3—No. 400, Empress Guns
50—No. 410-A, Straight Connections, ⅛" Pipe
6—No. 410-B, Straight Connections, ⅛" Female
6—No. 410-C, Straight Connections, ¼" Pipe
6—No. 410-D, Straight Connections, $\frac{5}{16}$-32 U. S. F.
6—No. 411-A, St. Connections, Ball Check, ⅛" Pipe
20—No. 412-A, 90° Elbow Connections, ⅛" Pipe
10—No. 414-A, 45° Elbow Connections, ⅛" Pipe

No. 455—Display Case ..... Each 56.50

Baker Web Ridge Touring Wall Tent

The All 'Round Camper's Tent

This tent has been well named the "All Round" Campers' Tent, for it not only is the style that has stood the test of time, but has added features that have proven to meet the popular desire and to fill the campers' need.

Waterproofed Top and Wall

Made of standard weight goods, the top and side walls are waterproofed, giving maximum weather protection. Please note the waterproofed material reaches clear to the ground at sides, a new feature in tents of this style.

No Ridge Pole Needed

No ridge pole is needed, a web ridge being sewed into the tent with a guy spliced in at each end of this web ridge. When tent is erected and guys properly stretched out and staked, the ridge is pulled straight without the need of the long ridge pole so hard to carry and handle with the old style wall tent.

Jointed Poles

The two poles supporting the tent are jointed so that the longest piece is only 4 ft. 3 in. long, making it easy to carry on the running board of the car, or even slip into a trunk if carried as baggage on train.

Gable End Style

Made gable end style, the front end has overlap door, while the back end is solid. With car parked in front of tent, the solid back will give added protection from intrusion.

Made in Two Sizes

Made regularly in two desirable sizes, No. 754, 7 feet wide by 7 feet deep; and No. 954, 9 feet 4 inches wide by 7 feet deep.

The No. 754 will easily accommodate two cots with plenty of roomspace, while three cots can be put in the No. 954 with ample dressing space between cots, or four can be crowded in if necessary.

Price includes stakes and jointed poles.

Priced as Follows

List Prices

No.	Size	Weight	Price
754	7 x7	20 lbs.	$20.00
954	9-4x7	24 lbs.	23.48

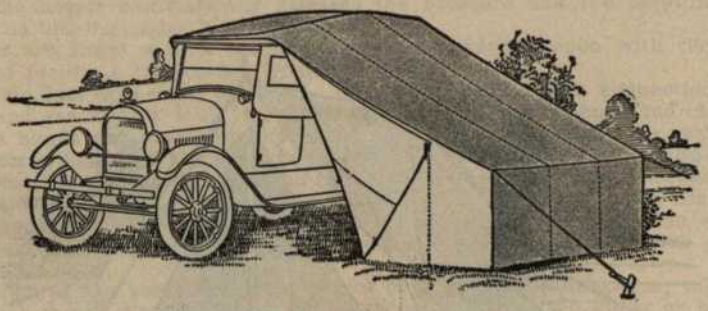
If solid poles are desired instead of jointed poles, deduct $0.48 from above prices.

Carrying bag furnished for either of the above tents at additional cost of.....$ 1.60

In ordering be sure to specify if you wish Carrying Bag.

For plain flat Paulins, Stack Covers, or Wagon Covers, refer to Index.

Baker "Knock About" Touring Tent



Easily and Quickly Erected

Made to fasten to the car by two canvas bands with one foot canvas awning or lip extending up over the top. Up in a jiffy, down in a jiffy, the most compact and lightest tent made for touring.

Waterproofed Top and Wall

Of standard material, has khaki waterproofed top and side wall opposite car where the protection from rain is most needed. Other walls white.

Tent is 6 feet high at car, side wall opposite car 2 feet 6 inches high.
Made in two sizes, No. 547 is 7 feet by 7 feet. No. 549 is 7 feet by 9 feet 4 inches.
No poles, easily carried, easily handled.

Priced as Follows

Prices include necessary stakes.

List Prices

No.	Size	Weight	Price
547	7x7	17 lbs.	$15.75
549	7x9-4	20 lbs.	17.25

Carrying Bag for above tent is.....$ 1.60

Baker "Special" Touring Tent

Waterproofed Top and Wall

Similar to the "Knock About" illustrated above except for addition of wall along side of tent next car, making tent close and tight when flap door is down and fastened. Top and wall opposite car are khaki, waterproofed, balance of tent is white.

Do Not Need to Fasten to Car

Tent at car is 6 feet high, back wall is 2 feet 6 inches high. As shown, tent is fastened to car by bands thrown over top and tied on opposite side. Or if desired, front wall of tent may be thrown over top of car and tied down. Or pole may be used at each front corner and tent put up and leave the auto entirely free. These poles may be secured at small additional expense.
As easily put up as the top of the car.
As easily carried as a grip.

Made in Two Sizes

Made in two sizes, No. 5477 is 7 feet by 7 feet, No. 5479 is 7 feet by 9 feet 4 inches.

Priced as Follows

Without poles, price includes necessary stakes.

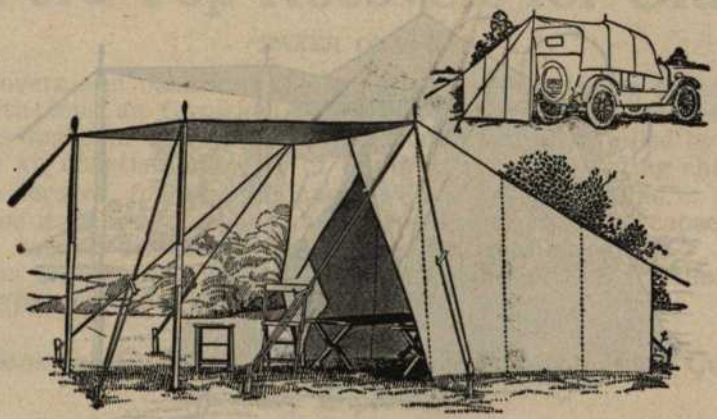
List Prices

No.	Size	Weight	Price
5477	7x7	18 lbs.	$17.35
5479	7x9-4	22 lbs.	20.00

If jointed poles are desired, add $1.10 to the above prices. If poles without joints are desired, add $0.63 to above prices.

Carrying Bag for above tent is.....$ 1.60

The Baker "Handy" Touring Tent



Top and Walls Waterproofed

It is the latest development in the "Auto" or "Lean to" Touring Tent.

Is made of standard weight duck, with the top and back wall of khaki waterproofed, giving maximum wet weather insurance at minimum cost, the rest of the tent being white.

Erected With or Without Car

This tent may be erected quickly and easily by simply attaching to car and staking out, but so often it is desired to have tent independent of car, and added room insures so much more comfort that jointed poles are provided so that tent may be set up as shown.

Double Weather Protection

This awning extends clear across open side of tent and 8 feet out from the tent, making a most comfortable addition to tent proper.

A canvas wall extends across front of tent divided in the middle, with plenty of overlap to make possible the closing the front of the tent to keep out wind and weather, and still leave awning up when desired. At night or during storm, the car may be driven under the extended awning, the poles removed and the awning tied down to car as shown in the second illustration. Note that the awning is long enough so that the edge comes below the top of the doors, thus completely protecting the contents of the car without the necessity of putting on side curtains. Affords almost immediate protection if rain storm comes up quickly. Canvas wall along front of the tent will keep rain from blowing around end of car into tent. More storm protection.

It's a real "handy" tent.

Dimensions and Sizes

Tent is 7 feet high at front, 2 feet 6 inches at rear wall. Poles are all 7 feet long, jointed in middle so that no piece is over 4 feet long.

Front corners are equipped with double guys as shown. The tent is made in two sizes. No. 7754 is 7 feet by 7 feet, and will easily hold two cots with ample dressing space between. No. 7954 is 7 feet wide by 9 feet 4 inches deep, and will comfortably accommodate three cots and four can be crowded in if necessary.

Priced as Follows

Price includes stakes and jointed poles all ready to set up.

List Prices

No.	Size	Weight	Price
7754	7x7	39 lbs.	$27.20
7954	7x9-4	42 lbs.	30.15

If poles without joints are desired, deduct $0.48 from above prices.

Carrying Bag for the above tents, each.....$ 2.42

When you order be sure to state whether or not you wish Carrying Bag.

Baker "Palmetto" Touring Tent

The 100% Tent

Embodies several features not found in any other tent.

1—Is waterproofed throughout—standard duck top, sides, door and awning.
100% rain protection.

2—Has heavy 12 oz. army khaki floor sewed in with threshold at door. (See illustration.)
100% protection from crawling things.

3—Has three windows, one each side and one in back, screened with bobbinet.

4—Has bobbinet screen curtains completely closing door opening.
100% protection from mosquitoes and flying things.
100% ventilation.

5—Has one center pole with light, strong frame, like umbrella frame, that fits into top. Adjustable on center pole. Is as easily raised as an umbrella. A little additional push tightens it.

6—Center pole 7 feet 3 inches long, awning poles 5 feet 6 inches long, all jointed so that the longest piece is only little over 4 feet long.

7—Windows protected by coverings operated from inside tent by pull-cords, without going outside of tent.
Door may be completely closed by awning which overlaps opening on both sides.
100% storm comfort.

Other instructive details.

Height of windows from ground, 3 feet.

Height to top of tent, 6 feet; height of peak, 7 feet 3 inches.

Size of windows, 9 inches square, set in diagonally.

The Baker "Palmetto" is made in four sizes: No. 5470 is 7 feet by 7 feet, No. 5488 is 8 feet by 8 feet, No. 5480 is 10 feet by 8 feet and No. 5400 is 10 feet by 10 feet ground measure.

Styles and Sizes

Also in three styles in each size.

1—As illustrated, with screened windows and bobbinet door curtains, and floor sewed in.

2—Without windows but equipped with bobbinet door curtains, with floor sewed in.

3—Without windows or door curtain or floor.

Prices Are as Follows:

Note windows are extra.

List Prices

With 12 oz. Khaki Army Floor and threshold sewed in, with bobbinet door curtains, but without windows.

No.	Size	Weight	Price
5470B	7x 7	41 lbs.	$36.60
5488B	8x 8	46 lbs.	39.57
5480B	10x 8	50 lbs.	49.23
5400B	10x10	56 lbs.	55.80

Windows Extra, 9x9 in., with bobbinet screen, each. 2.48

Without floor, or curtains or windows.

No.	Size	Weight	Price
5470W	7x 7	35 lbs.	$26.40
5488W	8x 8	37 lbs.	27.94
5480W	10x 8	40 lbs.	38.50
5400W	10x10	45 lbs.	42.30

If poles without joints are desired deduct $0.70 from above prices.

Carrying Bag for above tent at following prices:

For Nos. 5470B or 5470W.....$ 2.48
For Nos. 5488B or 5488W..... 2.60
For Nos. 5480B or 5480W..... 2.68
For Nos. 5400B or 5400W..... 2.84

In ordering be sure to specify if windows are desired and how many, and if Carrying Bags are wanted.

New Ford Top Recovers for Old Cars

"BAKER QUALITY"

Our top recovers and back curtains are made from patterns taken from cars equipped with tops as furnished originally by the factory on their new cars. Any changes made in the top adjustment or new tops installed by trim shops would cause an unsatisfactory fit of our recover, necessitating changes being made in the recover, for which changes we are not responsible.
We guarantee a fit when model number, year and passenger capacity are correctly given us and directions are followed for installation.
Back curtains are furnished in the style originally put on by the car manufacturer (Gypsy or straight) unless otherwise ordered.

Directions for Ordering Ford Top Recovers and Back Curtains Very Important

Give us all the information as listed below:
First—Material to be used. Second—Style of back curtain (Gypsy or straight). Third-Number and kind of lights in back curtain. Fourth —Year car was made. Fifth—Passenger capacity.

Description of Materials Used in Our Ford Top Recovers and Side Curtains

Standard Material—Is medium weight rubber, first quality, bright finish, furnished in black or drab back, pebble or long grain.
Extra Heavy Material—Is full 32-ounce weight, first quality rubber, bright finish, furnished in black or drab back, pebble or long grain.
French Topping—Is a high grade single texture material with a fine finish and we recommend it for its good appearance and splendid wearing qualities.

Directions for Installing Baker Quality Top Recovers

1. Take Off the Old Recover.
2. Examine quarter pads or top padding and if badly worn or compressed put on new ones. If this is not done the side quarters will fall too low on the sides, the top recover will seem to be too wide.
3. Examine the top of each wood bow carefully and pull out any tacks that may be left in them.
4. Renew broken or warped wood bows, if any.
5. Renew strainer webbing if broken or worn, as this keeps the bows in proper adjustment.
6. If necessary adjust rear bow with stay or back straps, so that the inside of the rear wood bow is perpendicular with outside of back of car.
7. Put on back curtain first, centering it on wood bow and tack to place, working from center to sides.
8. Put on top and center on front and rear bows. Temporarily tack rear and stretch to the front. Tack and stretch from center to sides. Trim off surplus at front and rear if necessary. The top should be stretched tight.
9. Tack on welt to cover tacks.

Samples of Top Recover Materials Furnished Upon Request

See Following Pages for Prices

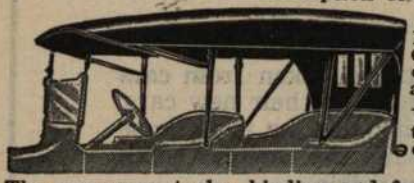
Returned Goods

Merchandise returned for credit without our permission will not be accepted. Write us for permission and state reason for wishing to make return. If made special to order, return will not be accepted by us, except when faulty in material, workmanship or fit, in which case the fault will be corrected and the merchandise returned to purchaser. If merchandise returned, through no fault of ours, is accepted, a handling charge will be made, governed by a regular schedule which will be furnished upon request.

Top Recovers and Back Curtains For Ford Cars

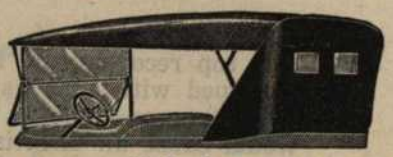
"BAKER QUALITY"

For Description of Materials and Directions for Installing, See Previous Page.



Baker Quality Top Recovers with Back Curtains are packed complete in a heavy cardboard box with riveted corners suitable for mailing without repacking.

We can furnish Gypsy Style Back Curtain with Top Recover or Back Curtain only for any of the early models.



The necessary tacks, binding and fasteners are packed with each outfit, top recover with back curtain complete in a substantial cardboard box.

Information Regarding Different Models of Ford Cars.

One pattern will fit Ford 1912-1913 and 1914 models.
One pattern will fit Ford 1915 to 1922 inclusive.
One pattern will fit Ford 1923 and 1924 models. (Take Gypsy style back curtains).

In Ordering Give Material, Style of Back Curtain, Number and Kind of Lights in Back Curtain Year Car Was Made and Passenger Capacity

Ford Top Recovers Complete With Back Curtains

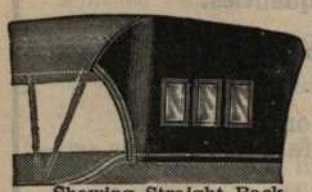
CELLULOID LIGHTS

List Price—Each	With Straight Style Back Curtain		With Gypsy Style Back Curtain	
	Lots of 12, Each	Less than 12, Each	Lots of 12, Each	Less than 12, Each
Ford Touring, Extra Heavy Material, with 2 6x10-in. Celluloid Lights	$ 9.53	$10.29	$10.30	$11.12
Ford Touring, Standard Material, with 2 6x10-in. Celluloid Lights	9.03	9.75	9.78	10.56
Ford Touring, French Topping Material, with 2 6x10-in. Celluloid Lights	10.18	10.99	11.07	11.96
Ford Roadster, Extra Heavy Material, with 2 6x10-in. Celluloid Lights	6.63	7.16	7.42	8.01
Ford Roadster, Standard Material, with 2 6x10-in. Celluloid Lights	6.30	6.80	7.08	7.65
Ford Roadster, French Topping, with 2 6x10-in. Celluloid Lights	7.03	7.59	7.95	8.58

If Top Recover only is wanted, deduct the price of corresponding grade Back Curtain (straight style) from prices given above.

If glass lights are wanted in back curtains, see price list extra for glass lights shown at bottom of page.

Ford Back Curtains Only, With Celluloid Lights



Showing Straight Back Curtain

Back curtains when sold separately are packed complete with the necessary binding and tacks in a cardboard box.

In Ordering Give Material, Style of Back Curtain Number and Kind of Light, Year Car Was Made and Passenger Capacity

Showing Gypsy Style Back Curtain

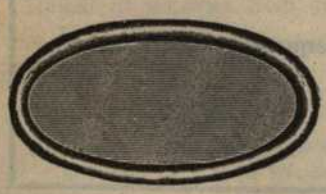
List Price Touring or Roadster Back Curtains for Ford Cars Both Same Price

List Price—Each	STRAIGHT STYLE Lots of 12, Each	STRAIGHT STYLE Less than 12, Each	GYPSY STYLE Lots of 12, Each	GYPSY STYLE Less than 12, Each
Back Curtain, Extra Heavy Material, with 2 6x10-in. Celluloid Lights	$2.65	$2.86	$3.44	$3.72
Back Curtain, Standard Material, with 2 6x10-in. Celluloid Lights	2.57	2.78	3.36	3.63
Back Curtain, French Topping, with 2 6x10-in. Celluloid Lights	2.77	2.99	3.67	3.96

Extra List Prices for Glass Lights in Back Curtains

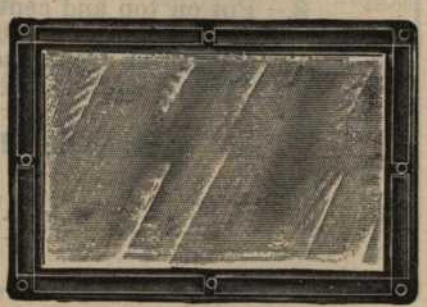
When Glass Lights are wanted in Back Curtain, add the list price of Glass Lights selected to the price of Top Receiver complete or to Back Curtain only as wanted.

For one No. 24 add 5c; for two No. 24 add 38c; for one No. 25 add 45c; For two No. 29 add 76c; for one No. 30 12-inch bevel plate glass light add 94c.



No. 24—Size 4x7-inch D. S. Plain Glass

No. 25—Size 6x12-inch D. S. Plain Glass



No. 29—Size 6x10-inch Plain Glass

Regular Style Side Curtains for Ford Cars

"BAKER QUALITY"

Furnished both in full sets and individual curtains.—The necessary fasteners are furnished with all side curtains.

Our side curtains are cut to fit either straight or Gypsy style back curtains, as ordered.

In Ordering Give Material, Passenger Capacity, Year Car Was Made And if For Prior to 1923 State if to Fit Straight or Gypsy Style Back Curtain

Full Sets Regular Ford Side Curtains

List Prices	12 Set Lots, Per Set	Less Than 12, Each Set
Touring, Extra Heavy Material	$11.37	$12.28
Touring, Standard Material	10.99	11.87
Touring, French Topping Material	12.05	13.01
Roadster, Extra Heavy Material	$ 6.63	$ 7.16
Roadster, Standard Material	6.43	6.94
Roadster, French Topping Material	6.98	7.54

Individual or Broken Sets Regular Ford Side Curtains

List Prices	FRONT CURTAINS Lots of 12, Per Curtain	Less Than 12, Each Curtain
Touring, Extra Heavy Material	$ 2.32	$ 2.51
Touring, Standard Material	2.27	2.45
Touring, French Topping Material	2.42	2.61
Roadster, Extra Heavy Material	$ 2.34	$ 2.53
Roadster, Standard Material	2.27	2.45
Roadster, French Topping Material	2.47	2.67
REAR CURTAINS		
Touring, Extra Heavy Material	$ 3.72	$ 4.02
Touring, Standard Material	3.58	3.87
Touring, French Topping Material	4.01	4.33
Roadster, Extra Heavy Material	$ 1.31	$ 1.41
Roadster, Standard Material	1.26	1.36
Roadster, French Topping Material	1.36	1.47

Open With Door Side Curtains for Ford Cars Complete With Irons

"BAKER QUALITY"

This small illustration shows the socket and rod furnished with our open with door side curtains.
Sockets are pressed steel, securely held in place by four screws.
The rods fit tightly into the wedge shape socket.
Sedan or Coupe comfort for open model Ford cars—Fit perfectly—keep out the wind and rain.
Open with door side curtains are furnished complete with door irons and all attachments ready to install.
Packed in a substantial cardboard carton suitable for mailing without repacking.
The right front and two rear curtains on the Ford Touring are made to open with the door.

In Ordering Give Material, Passenger Capacity, Year Car Was Made And if For Prior to 1923 State if to Fit Straight or Gypsy Style Back Curtain

Full Sets for 1923 and 1924 Ford Cars

List Prices	12 Set Lots, Per Set	Less Than 12, Each Set
Touring, Extra Heavy Material	$13.69	$14.79
Touring, Standard Material	13.35	14.41
Touring, French Topping Material	14.34	15.49
Roadster, Extra Heavy Material	$ 8.37	$ 9.04
Roadster, Standard Material	8.27	8.93
Roadster, French Topping Material	8.67	9.36

Full Sets for 1922 and Earlier Ford Cars

List Prices	12 Set Lots, Per Set	Less Than 12, Each Set
Touring, Extra Heavy Material	$15.55	$16.79
Touring, Standard Material	15.12	16.32
Touring, French Topping Material	16.30	17.60
Roadster, Extra Heavy Material	$10.44	$11.28
Roadster, Standard Material	10.16	10.97
Roadster, French Topping Material	10.94	11.82

Individual or Broken Sets Open With Door Side Curtains

For 1923 and 1924 Ford Cars—List Prices	RIGHT FRONT Lot of 12, Per Curtain	RIGHT FRONT Less Than 12, Each Curtain	RIGHT REAR Lot of 12, Per Curtain	RIGHT REAR Less Than 12, Each Curtain	LEFT FRONT Lot of 12, Per Curtain	LEFT FRONT Less Than 12, Each Curtain	LEFT REAR Lot of 12, Per Curtain	LEFT REAR Less Than 12, Each Curtain
Touring, Extra Heavy Material	$4.31	$4.65	$3.50	$3.78	$3.38	$3.65	$3.50	$3.78
Touring, Standard Material	4.26	4.60	3.48	3.76	3.33	3.60	3.48	3.76
Touring, French Topping Material	4.51	4.87	3.66	3.95	3.68	3.97	3.66	3.95
Roadster, Extra Heavy Material	2.65	2.86	1.24	1.34	2.12	2.29	1.24	1.34
Roadster, Standard Material	2.60	2.81	1.21	1.31	2.07	2.24	1.21	1.31
Roadster, French Topping Material	2.75	2.97	1.29	1.39	2.22	2.40	1.29	1.39
For 1922 and Earlier Ford Cars—List Prices								
Touring, Extra Heavy Material	$4.76	$5.14	$4.08	$4.41	$3.48	$3.76	$4.08	$4.41
Touring, Standard Material	4.66	5.03	3.93	4.24	3.40	3.67	3.93	4.24
Touring, French Topping Material	4.94	5.34	4.33	4.68	3.65	3.94	4.33	4.68
Roadster, Extra Heavy Material	4.21	4.55	2.07	2.24	3.45	3.73	2.07	2.24
Roadster, Standard Material	4.11	4.44	2.02	2.18	3.38	3.65	2.02	2.18
Roadster, French Topping Material	4.39	4.74	2.17	2.34	3.63	3.92	2.17	2.34

One Man Tops Complete
FOR FORD CAR

Our Baker Quality One Man Tops are furnished complete, ready to install.
Made from 32-oz., long grain rubber; drab back. Side curtains are of same material. Back curtain is Gypsy style with one 6x12-inch bevel plate glass.
Crated for Shipment

In Ordering Give Year of Car and Passenger Cap.

One Man Top for Ford Touring, Complete, Each } WRITE FOR
One Man Top for Ford Roadster, Complete, Each } PRICES

Quarter Padding for Ford Cars

Furnished in pairs complete in either black or drab color. Black is always sent unless otherwise ordered.
Made 7 inches wide with cotton filling, with or without webbing reinforcement.
In ordering, specify if for Touring or Roadster and if wanted with or without webbing.

List Prices in Pairs	Without Webbing Re-enforcement Lots 12 Pair, Each Pair	Without Webbing Re-enforcement Each Pair	With Webbing Re-enforcement Lots 12 Pair, Each Pair	With Webbing Re-enforcement Each Pair
Touring, Quarter Pads	$2.25	$2.47	$2.70	$2.97
Roadster, Quarter Pads	1.24	1.36	1.47	1.61

Bow Covering For Ford Tops

Furnished in sets, each set containing enough for one full set of bows.

List Prices	Lot of 12 Per Set	Each Set
Bow Covering for Ford Touring	$0.88	$0.97
Bow Covering for Ford Roadster	.49	.54

Strainer Webbing For Ford Tops

1¼ inches wide; black or drab colors.

List Price	
Strainer Webbing, per yard	$0.18

Top Boot or Dust Hood for Ford Cars

For protection to the top when down. Covers the top completely, but not the bows at side. Three grades of material, touring or roadster, same price.

In Ordering State if for Touring or Roadster and Give Year of Car.

List Prices	Enamel Drill Lots of 12, Each	Enamel Drill Less than 12, Each	Standard Rubber Lots of 12, Each	Standard Rubber Less than 12, Each	Ex. Hvy. Rubber Lots of 12, Each	Ex. Hvy. Rubber Less than 12, Each
Top Boots	$4.58	$5.04	$5.07	$5.58	$5.20	$5.72

Anti Draft Shields for Ford Cars No. 14

Closes the opening between the windshield and front bow. Keeps out the wind and rain. Will fit any model Ford car.

List Prices	Lots of 12, Each	Less than 12, Each
No. 14 Anti Draft Shield	$0.67	$0.74

Rain Guards for Ford Cars

Baker Quality Rain Guards for Ford Cars are a real necessity. They prevent water from dripping through the hood which "shorts" the wiring. The small end slips over radiator cap. The large end is fastened to windshield with snap fasteners. Easy to attach or detach.

In Ordering Specify 1922 and Earlier or 1923 and Later

List Price	Lots of 12, Each	Less than 12, Each
Rain Guards	$1.91	$2.10

Foot Pedal Shields for Ford Cars

Protects the driver from heat and dust in the summer and from the cold in winter. Each set consists of two pieces—one for the pedals and one for the emergency brake.

Furnished in 3 grades of material. Will fit all models of Ford cars. Packed in individual envelopes.

List Prices	Lots of 12, Each	Less than 12, Each
No. 19—Art Leather Face, Enamel Back, Kersey Lining, Attached with Large Head Nails	$0.93	$1.02
No. 20—Rubber Face, Duck Back, Kersey Lining, Attached with Large Head Nails	.85	.94
No. 23—Enamel Face, Kersey Back, Attached with Large Head Nails	.45	.50

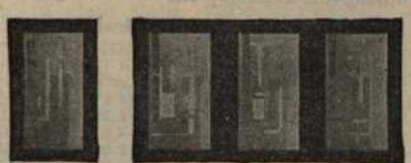
Door Covers for Ford Cars

Made from extra heavy rubber topping material.
Furnished for the blind door as well as right front, right and left rear.

In Ordering Specify for Which Door Wanted and if With or Without Pocket and Give Model and Passenger Capacity.

List Prices	Lots of 12, Each	Less than 12, Each
No. DP, with Pocket	$1.11	$1.22
No. D, without Pocket	.72	.79

Back Curtain Lights for Fords



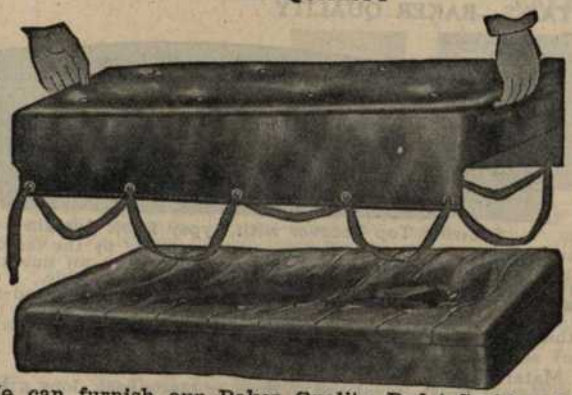
Showing 3-in-1 and No. 1 Single Lights for 1922 and Earlier Models.

Celluloid Replacement Lights

Showing No. 2 Single Lights for 1923 and Later.

List Prices	Lots of 12, Each	Less than 12, Each
3-in-1 Replacement Light, 1915-22	$1.35	$1.49
No. 1—Single Replacement Light, 1915-22	.36	.40
No. 2—Single Replacement Light for 1923 and Later Models	.36	.40

"Pad-A-Cushion"
"BAKER QUALITY"



We can furnish our Baker Quality Pad-A-Cushion for Fords and other small cars. Makes your old cushion look like new. If there is a hole in your old cushion fill it up with an old pillow or wad of cloth, slip the Pad-A-Cushion over and lace up.

In Ordering Specify Model and Year of Car and if for Front or Rear Cushion

List Prices	Lots of 12, Each	Less than 12, Each
Ford Front "Pad-A-Cushion"	$4.97	$5.47
Ford Rear "Pad-A-Cushion"	5.20	5.72
For Any Other Small Car	6.75	7.43

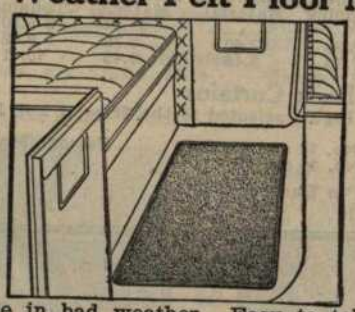
Carpets for Ford Cars

Oxford gray. Well reinforced around cutouts and with bound edges.

In Ordering Specify Model, Year and Passenger Capacity

List Prices	Lots of 12, Each	Less than 12, Each
Roadster	$2.77	$3.05
Coupe	4.94	5.43
Touring	5.41	5.95
Sedan (Specify if Two or Four-Door)	6.65	7.32

Bad Weather Felt Floor Mats



Fine for use in bad weather. Easy to take out and clean.

	List Price
No. 15—15x32 inches. Each	$1.60
No. 20—20x38 inches. Each	1.79

Cushion Covers for Fords
"BAKER QUALITY"

Showing old cushion before Baker Quality Cushion Cover is applied.

Showing cushion with cushion cover applied. Slips over the old cushion and laces to place, insuring a snug fit. Adds to the appearance of a worn cushion and doubles the wear. Made from pebble grain material.

In Ordering Specify Model, Year and Passenger Capacity—Also if for Front or Rear Cushion

List Prices	Lots of 12, Each	Less than 12, Each
Front Seat Cushion Cover	$2.90	$3.19
Rear Seat Cushion Cover	3.26	3.59

Advertising Tire Covers for Ford Cars

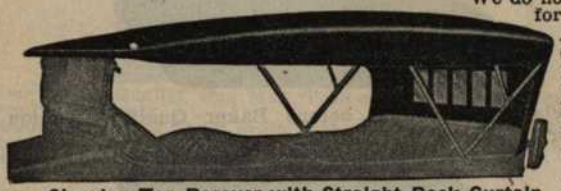
Tire Covers as a means of advertising have proven to be not only efficient but economical. Considering that statistics show the average automobile travels twenty miles per day the year around it means a very large number of people read the advertising on one car, and if 100 Tire Covers or more are put out, each bearing the same advertisement, the territory covered and results obtained are remarkable. We have developed a number of different colors which can be easily read even when the car is moving at high speed. Prices for printing or Baker Chrome Art work shown on page 91.

Top Recovers for all Open Cars (Except Fords)

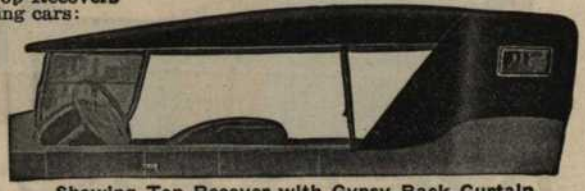
COMPLETE WITH BACK CURTAINS—BAKER QUALITY

We do not furnish Top Recovers for the following cars:

Apperson
Cadillac
Franklin
Kissel
Lincoln
Marmon
Pierce-Arrow



Showing Top Recover with Straight Back Curtain



Showing Top Recover with Gypsy Back Curtain

Baker quality top recovers are made from patterns taken from cars equipped with tops as furnished originally by the factory on their new cars. Any changes made in the top adjustment or new tops installed by trim shops would cause an unsatisfactory fit of our recover, necessitating changes being made in the recover for which changes we are not responsible.
We guarantee a fit when model number, year and passenger capacity are correctly given us and directions are followed for installation.
Back Curtains are furnished in the style originally put on by the car manufacturer (gypsy or straight) unless otherwise ordered.

Description of Materials

Extra Heavy Material—Is full 32-ounce weight, first quality rubber, bright finish, furnished in drab or black back, long grain.
French Topping is a high grade, single texture material with a fine finish, and we recommend it for its good appearance and splendid wearing qualities; furnished in drab back, long grain only.
Double Texture Material, as furnished in our best grade Recover, is of the same quality as furnished on the highest priced cars. It will meet all requirements for both quality and service. Furnished in drab back, long grain only.

Classification of Top Recovers

We are listing the Chevrolet Superior 1923 and 1924 model separately, as a number of our dealers make it a stock item. All other cars are listed in two classes, the small and medium size cars in Class A and the larger cars in Class B.

List Prices Top Recovers Complete with Back Curtains (Other Than Fords)

Packed complete with binding and tacks in a heavy cardboard box suitable for mailing without repacking.

In Ordering Specify Material, Style Back Curtain, Year Car Was Made, Model Number and Passenger Capacity

Chevrolet Superior 1923 and 1924 Models Only, Top Recover with Back Curtain

(See Class A for 490 Model)

List Price Top Recover Complete with Back Curtain, Celluloid Lights
For Lots of 12 or More Deduct 5%

	With Gypsy Style Back Curtain		
	Extra Hvy. Material	French Topping	Double Tex. Material
Chevrolet Superior Roadster (See Class A for 490 Model) with Celluloid Lights—List, Each	$ 9.74	$10.24	$12.77
Chevrolet Superior Touring (See Class A for 490 Model) with Celluloid Lights—List, Each	14.29	15.08	19.07

Class A Cars, Top Recover with Back Curtain

Allen, Buick, Chevrolet 490 model only, Essex, Gardner, Grant, Gray, Hupmobile, Maxwell, Nash 4-cyl., Overland, Oldsmobile 4-cyl., Overland 4-cyl., Saxon (except Duplex), Star, Studebaker Light Six and Willys-Knight 2 or 5-passenger.

List Prices Top Recover Complete with Back Curtain, Celluloid Lights
For Lots of 12 or More Deduct 5%

	With Straight Style Back Curtain			With Gypsy Style Back Curtain		
	Extra Hvy. Material	French Topping	Double Tex. Material	Extra Hvy. Material	French Topping	Double Tex. Material
All Class A Roadsters with Celluloid Lights—List, Each	$11.64	$12.20	$15.01	$12.83	$13.42	$16.42
All Class A Tourings with Celluloid Lights—List, Each	15.26	16.04	19.98	18.31	19.31	24.16

Class B Cars, Top Recover with Back Curtain

All Cars Not Listed as Class A Will Be Priced as Class B Cars

List Prices Top Recover Complete with Back Curtain, Celluloid Lights
For Lots of 12 or More Deduct 5%

	With Straight Style Back Curtain			With Gypsy Style Back Curtain		
	Extra Hvy. Material	French Topping	Double Tex. Material	Extra Hvy. Material	French Topping	Double Tex. Material
All Class B Roadsters with Celluloid Lights—List, Each	$13.80	$14.46	$17.58	$17.10	$17.94	$21.96
All Class B 5-Pass. Tourings with Celluloid Lights—List, Each	17.37	18.33	23.01	20.01	21.12	26.64
All Class B 7-Pass. Tourings with Celluloid Lights—List, Each	18.63	19.65	24.90	22.11	23.40	28.92

If glass lights are wanted in back curtain, see list given below; extras to be added to above prices for glass lights.
If Top Recover only is wanted, deduct the price of corresponding grade back curtain (straight style) from prices given above.

Back Curtains Only, All Models

List Price for Each Back Curtain with Celluloid Lights
For Lots of 12 or More Deduct 5%

	STRAIGHT STYLE			GYPSY STYLE		
	Extra Hvy. Material	French Topping	Double Tex. Material	Extra Hvy. Material	French Topping	Double Tex. Material
Chevrolet Superior 1923-24 Touring or Roadster—List, Each	.....	.....	.....	$5.94	$ 6.20	$ 7.33
All Class A Cars, Touring or Roadster—List, Each	$5.81	$6.26	$7.40	8.75	9.42	11.42
All Class B Cars, Touring or Roadster—List, Each	6.87	7.38	8.46	9.45	10.41	12.48

Extra List Prices for Glass Lights in Back Curtains

When Glass Lights are wanted in Back Curtain, add the list price of Glass Lights selected to the price of Top Recover complete or to Back Curtain only as wanted.

For two No. 7 add $1.13
For one No. 12 add $1.55
For one No. 16 add $5.08
For two No. 12 add $3.78
For one No. 19 add $5.80
For one No. 14 add $2.34

Sizes and Styles Bevel Glass Lights Furnished in Back Curtains

No. 7 — 4¼x7 in.
No. 12 — 6x12 in.
No. 14 — 6x14 in.
No. 16 — 7½x16 in.
No. 19 — 7½x19 in.

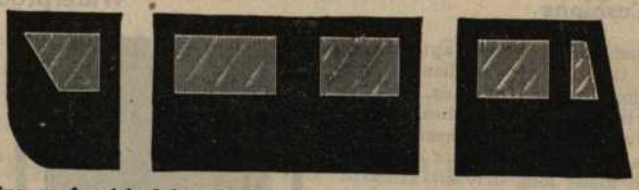
Samples of Top Materials Furnished Upon Request

Side Curtains for all Open Cars (Except Fords)

"BAKER QUALITY"

Our Side Curtains are made to duplicate those originally furnished with the car.

The necessary fasteners and eyelets are furnished.



We offer a selection of the same materials for Side Curtains as we furnish in our Top Recovers.

When the original Side Curtains as furnished by the car manufacturer are made open-with-door style, we furnish ours made to fit the same original irons. We cannot furnish open-with-door curtains for cars which are not so equipped by the factory. We cannot furnish irons for this style curtain.

Classification of Side Curtains

We Are Listing Chevrolet Superior 1923 and 1924 Model Separately, as a Number of Our Dealers Make It a Stock Item. All Other Side Curtains Are Listed In Two Classes, the Small and Medium Size Cars In Class A and the Larger Cars In Class B.

List Prices Side Curtains for all Open Cars (Except Fords)

In Ordering Specify Material, Year Car Was Made, Model Number and Passenger Capacity

Chevrolet Superior 1923 and 1924 Models

List Prices

	Extra Heavy Material	French Topping	Double Tex. Material
Chevrolet Superior Roadster—List, per Set	$ 8.80	$ 9.04	$10.30
Chevrolet Superior Touring —List, per Set	15.83	16.71	19.21

In Lots of 12 Sets or More Deduct 5% from Single Set Price

Class A Cars, Side Curtains

Allen, Buick 4-Cyl., Chevrolet 490 Model Only, Essex, Gardner, Grant, Gray, Hupmobile, Maxwell, Nash 4-Cyl., Oakland, Oldsmobile 4-Cyl., Overland 4 Cyl., Saxon (except Duplex), Star, Studebaker Light Six and Willys-Knight 2 or 5-Passenger.

List Prices

	Extra Heavy Material	French Topping	Double Tex. Material
All Class A Roadster Side Curtains—List, per Set	$12.25	$12.64	$14.71
All Class A Touring Side Curtains—List, per Set	16.87	17.46	20.25

In Lots of 12 Sets or More Deduct 5% from Single Set Price

Class B Cars, Side Curtains

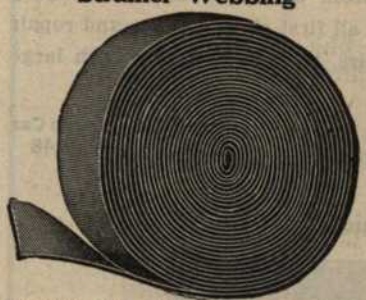
All Cars Not Listed Above in Class A Will Be Priced as Class B Cars

List Prices

	Extra Heavy Material	French Topping	Double Tex. Material
All Class B Roadster Side Curtains—List, per Set	$15.45	$15.75	$18.72
All Class B 5-Passenger Touring Side Curtains—List, per Set	23.73	24.33	27.33
All Class B 7-Passenger Touring Side Curtains—List, per Set	25.08	25.71	29.31

In Lots of 12 Sets or More Deduct 5% from Single Set Price

Strainer Webbing



Furnished in either drab or black color; 1¼ in. in width.

	List Price
Black or Drab, per Yard	$0.18

Quarter Padding

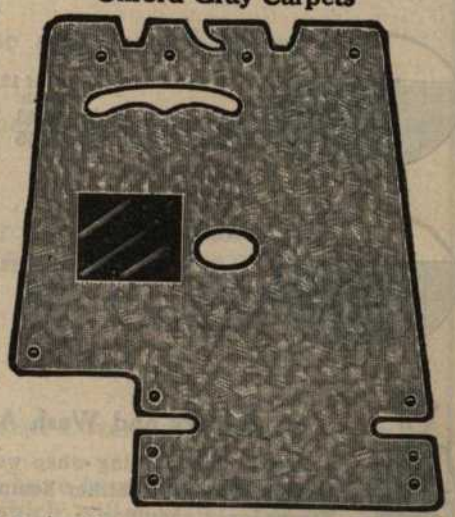
For Cars Other Than Ford

Quarter Pads should be renewed when a new Top Recover is put on the car. Reinforced with one strip of webbing.

Furnished in either black or drab color, both same price.

	List Price
Quarter Padding, per Foot	$0.25

Oxford Gray Carpets



Dark gray. Very serviceable material. Edges bound with art leather and reinforced under heel rest.

	List Price
Roadster Carpet, Complete, Each	$ 6.54
2-Passenger Coupe, Complete, Each	7.05
3-Passenger Coupe, Complete, Each	9.00
5-Passenger Touring, Complete, Each	11.97
5-Passenger Sedan, Complete, Each	12.15
7-Passenger Touring, Complete, Each	14.10
7-Passenger Sedan, Complete, Each	14.40

Top Boot or Dust Hood

For protection when top is down; covers all the top except the side bows. Furnished for a number of the small cars such as Buick 4-cyl., Chevrolet, Essex, Maxwell, Oakland, Overland 4, Saxon and Star.

List Prices	Each
Standard Rubber	$8.52
Extra Heavy Rubber	8.83

Baker Quality Auto Necessities

Comfy Cushions

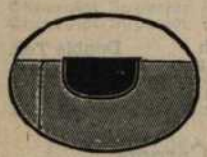
These Cushions are a real auto necessity for the driver who has trouble in reaching the foot controls. It sets the driver forward 3 inches. Most lady drivers appreciate these Comfy Cushions as well as tourists or salesmen who make long drives. They fit into the hollow of the driver's back, relieving back strain; fill up depressions in the upholstery of back or cushion.

List Prices

	Lots of 12, Each	Less than 12, Each
No. 1—14x14-in. Long Grain Topping Cover, Beaded Edges, Cotton Filled, Secured by Tufting Buttons	$1.99	$2.15
No. 55—14x14-in. Black Cover, Beaded Edges, Moss Filled, Secured by Tufting Buttons	1.61	1.74

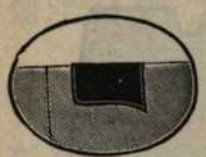
Door Shields

Covered with Topping Material. Metal filled always sent unless otherwise ordered.



No. 1—List Prices

	Lots of 12, Each	Less than 12, Each
Metal Filled	$0.32	$0.35
Lead Filled	.49	.54



No. 2—List Prices

	Lots of 12, Each	Less than 12, Each
Metal Filled	$0.43	$0.47
Lead Filled	.65	.72

No. 3—List Prices

	Lots of 12, Each	Less than 12, Each
Metal Filled	$0.43	$0.47
Lead Filled	.65	.72

Battery and Wash Aprons

Protect the clothing when working around the car. All edges either hemmed or bound. Straps over shoulder.

List Prices

	Lots of 12, Each	Less than 12, Each
Wash Apron, Auto Rubber	$1.94	$2.13
Battery Apron, Acid Proof	2.70	2.97

Waterproof Pillows

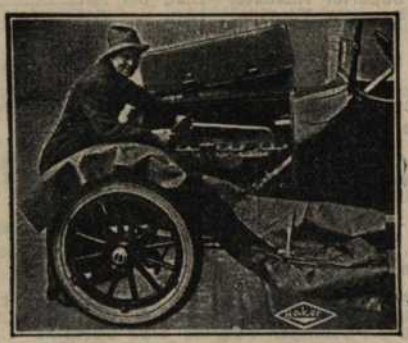
For tourists and campers. Can be used as a pillow, a back rest or a cushion.

Waterproof Art Leather Cover, filled with Java Kapoc. This material makes a life preserver of the pillow. Ideal for canoeing and motor boating.

The strap handles are very convenient for holding to when used in the water.

	Lots of 12, Each	Less than 12, Each
No. 16—16x16-in.	$2.65	$2.91
No. 20—20x20-in.	3.83	4.21

Fender Protectors



Protects the fenders from scratches made by laying tools on them. Used by all first class garages and repair shops. Furnished in pairs, right and left, for both large and small cars.

	Small Car	Large Car
10-oz. Khaki Duck, per pair	$5.10	$6.48

Mechanic's Seat Covers

Our Mechanic's Seat Covers protect the cushions and backs from grease and dirt while mechanics are working inside cars. Prevents soiling of seat covers and all upholstery. Made large enough to cover seat backs and sides.

List Price

8-oz. Khaki Duck, for Solid Seats. Each	$6.62
One Pair for Divided Seats. Per Pair	7.53

Baker Quality Seat Covers

On the following pages we show the four different styles of Seat Covers we can supply, with a description of each style.

Cars for Which We Do Not Make Seat Covers

On account of variations in the bodies of several of the higher-priced cars we recommend a hand tailored job, such as can only be secured from a trim shop. The following cars should have hand tailored Seat Covers: Apperson, Cadillac, Franklin, Kissel, Lincoln, Marmon and Pierce-Arrow.

Materials

In selecting materials we have endeavored to not only furnish quality but a selection of patterns that will appeal to the most discriminating buyer.

Description of Materials

M3—Olive drab, closely woven fast color. A popular low-price material.
R10—Two-tone light and dark tan stripes with fine white lines, linen finish.
X21—Gray covert cloth, solid color.
X22—Same as X21, but with blue and black stripes.

Y Patterns

The following Y patterns are closely woven splendid wearing materials and we recommend them to those wishing durability as well as a good appearance:

Y50—Buff and white stripes, diagonal weave.
Y51—Tan with white mixture, green and white stripes, corded.
Y52—Tan ground with green, burnt orange and black stripes.
Y53—Light tan ground, diagonal weave with blue border, orange stripes with fine black and white stripes between.
Y54—Gray mixed with alternating red and green stripes, very serviceable.

Additional Y Patterns

We expect to add additional Y patterns during the season as they are developed by the mills.

A20—Light gray, closely woven.
C100—Brown and gray stripes, dyed in the yarn; harmonizes with upholstery of most all enclosed cars.

Wool Fabrics

Closely woven hard finish fabrics with woven narrow color stripes, very high grade fast color materials. We offer the following numbers to those who wish to combine highest quality with service.

E4033—Gray ground with three blue silk stripes.
E4073—Gray ground with three green silk stripes.
E4113—Gray ground with three white silk stripes.

All orders sent us which do not specify the style Seat Covers wanted will be filled with our special Seat Covers.

If you find you want full dress after special covers have been shipped, simply order kick pad and cowl pieces of same material, which will complete the set, and for which a charge will be made.

Samples of materials from which our Seat Covers are made will be furnished upon request.

Special Seat Covers, "Baker Quality"

Samples of Materials Furnished Upon Request

We Always Ship Special Seat Covers Unless Otherwise Ordered

FOR DESCRIPTION OF MATERIALS SEE PREVIOUS PAGE.

Baker Quality Special Seat Covers are packed complete in a heavy cardboard box, suitable for mailing.

Construction of Special Seat Covers

Our Special Seat Covers are made to cover all Cushions, Backs, Sides and Doors, but the **Kick Pad and Cowl Pieces are not included.** See price list at bottom of page for Kick Pad and Cowl Pieces when wanted separately.
The edges are turned and hemmed. Arm Rests are reinforced with art leather of suitable color to match materials used. We use black art leather with some of our patterns and colors with others.

Japanned Saddle Nails with Large Heads are furnished for attaching. Cushions are laced on under side. Door Covers are provided with cut-out and overlap, allowing easy access to pockets in upholstery on all cars except Fords and a few other cars which do not have pockets in doors.

Special Seat Covers are Always Shipped Unless Other Styles are Specified

Classification—We are listing Special Seat Covers for Ford and Chevrolet Superior Model Cars separately; all other cars being divided into two classes—Class One for the small and medium size cars and the larger cars in Class Two.

Directions for Ordering Special Seat Covers for Ford Cars

On account of changes made in Ford models covering different years, it is necessary to give us the year car was made as well as the model.

Different Patterns Are as Follows for Ford Cars

Ford Roadster 1915 and 1916 are the same; 1917 to and including 1922 are the same; 1923 and 1924 are the same.
Ford Touring 1915 and 1916 are the same; 1917 to and including 1921 are the same; 1922 takes one pattern; 1923 and 1924 are the same.
Ford Coupe 1917, 1918 and 1919 are the same; 1920, 1921 and early 1922 are the same; late 1922 and 1923 are the same; 1924 takes a separate pattern.
Ford Sedan 1917, 1918 and 1919 are the same; 1920 takes one pattern; early 1922 takes one pattern; late 1922, 1923 and 1924 are the same, but be sure and state if for two or four-door.

In Ordering Seat Covers Be Sure and Specify Make of Car, Model Number, Year and Passenger Capacity

Special Seat Covers for Ford Cars, List Prices

All Materials Bearing the Same Prefix Letter Are the Same Price, Regardless of the Pattern of Cloth

List Prices per Set		MATERIALS					
		M	R and X	Y	A	C	E
Ford Roadster	Lots of 12 Sets, per Set	$ 5.25	$ 5.99	$ 6.12	$ 6.28	$ 8.72	$10.34
Ford Roadster	Less than 12 Sets, per Set	5.67	6.47	6.61	6.78	9.42	11.17
Ford Touring	Lots of 12 Sets, per Set	9.93	11.29	11.63	11.91	16.54	19.62
Ford Touring	Less than 12 Sets, per Set	10.73	12.20	12.56	12.86	17.87	21.19
Ford Coupe	Lots of 12 Sets, per Set	6.56	7.56	7.69	7.95	11.19	13.38
Ford Coupe	Less than 12 Sets, per Set	7.09	8.17	8.31	8.59	12.09	14.45
Ford Sedan	Lots of 12 Sets, per Set	12.89	14.69	15.05	15.38	21.22	25.13
Ford Sedan	Less than 12 Sets, per Set	13.92	15.87	16.26	16.61	22.92	27.14

Special Seat Covers for Chevrolet Superior 1923 and 1924 Models Only, List Prices

See Class One for Chevrolet 490 Models

List Price per Set For 12 Sets or More Deduct 5%		MATERIALS					
		M	R and X	Y	A	C	E
Chevrolet Superior Roadster	Per Set	$ 7.18	$ 8.05	$ 8.21	$ 8.37	$11.18	$13.04
Chevrolet Superior Touring	Per Set	14.83	16.69	17.04	17.39	22.90	26.75
Chevrolet Superior Coupe	Per Set	8.48	9.70	9.91	10.15	14.07	16.69
Chevrolet Superior Sedan	Per Set	15.10	16.82	17.25	17.75	23.50	27.50

Class One Special Seat Covers, List Prices

Following list of cars in Class One: Allen, Buick 4-Cyl., Chevrolet 490 Model only, Essex, Gardner, Grant, Gray, Hupmobile, Maxwell, Nash 4-Cyl., Oakland, Oldsmobile 4-Cyl., Overland 4-Cyl., Saxon (except Duplex), Star, Studebaker Light Six and Willys-Knight 2 or 5-Passenger.

List Price per Set For 12 Sets or More Deduct 5%		MATERIALS					
		M	R and X	Y	A	C	E
All 2 or 3-Passenger Open Cars	Per Set	$ 9.06	$10.18	$10.35	$10.41	$13.14	$14.99
All 4 or 5-Passenger Open Cars	Per Set	15.47	17.30	17.66	17.92	23.71	27.56
All 2 or 3-Passenger Enclosed Cars	Per Set	12.43	13.42	13.61	13.78	16.99	19.10
All 4 or 5-Passenger Enclosed Cars	Per Set	15.67	17.55	17.92	18.28	24.21	28.46

Class Two Special Seat Covers, List Prices

All Cars Not Listed Above in Class One Will Be Priced as Class Two Cars

List Price per Set For 12 Sets or More Deduct 5%		MATERIALS					
		M	R and X	Y	A	C	E
All 2 or 3-Passenger Open Cars	Per Set	$11.91	$12.99	$13.17	$13.38	$16.80	$19.05
All 4 or 5-Passenger Open Cars	Per Set	18.81	21.06	21.48	21.93	29.34	33.63
All 7-Passenger Open Cars	Per Set	23.10	24.57	25.59	25.98	32.82	37.35
All 2 or 3-Passenger Enclosed Cars	Per Set	17.97	20.07	20.49	20.88	27.72	32.25
All 4 or 5-Passenger Enclosed Cars	Per Set	19.92	22.68	23.19	23.76	32.85	38.91
All 7-Passenger Enclosed Cars	Per Set	27.81	31.20	31.83	32.49	43.47	50.79

Extra for Kick Pad and Cowl Pieces

We can furnish both Kick Pad and Cowl Pieces for any set of Special Seat Covers previously shipped if furnished with the necessary information as to year and model of car and the number of our material.
Both Kick Pad and Cowl Pieces are 15% of the price of full set of Special Seat Covers.
Kick Pad only is 10% of the price of full set. Cowl Pieces only are 5% of the price of full set.

Full Dress Seat Covers, "Baker Quality"

Samples of Materials Furnished Upon Request

Full Dress Seat Covers are shipped only when specified.

We do not furnish seat covers for the following cars: Apperson, Cadillac, Franklin, Kissel, Lincoln, Marmon and Pierce-Arrow.

Each set of Full Dress Seat Covers is packed complete in a heavy cardboard box, ready to mail without repacking.

The top boot or dust hood shown in the illustration on this page is not included in a set of Full Dress Seat Covers.

FOR DESCRIPTION OF MATERIALS SEE PREVIOUS PAGE.

Construction of Full Dress Seat Covers

Baker quality Full Dress Seat Covers are made to cover all cushions, backs, sides and doors and include kick pad or cover for back of front seat and cowl pieces. All edges are bound with art leather, the arm rests are reinforced with heavy art leather of suitable color to match material used, glove fasteners are used for attaching. Door covers are provided with cut out and overlap, allowing easy access to pockets in upholstery on all cars other than Fords. As Ford cars have no pockets in the doors we provide door covers with pockets for all Ford models.

Directions for Ordering Full Dress Seat Covers for Ford Cars

On account of changes made in Ford models covering different years it is necessary to give us the year car was made as well as the model.

Different Patterns Are as Follows for Ford Cars

Ford Roadster—1915 and 1916 are the same. 1917 to and including 1922 are the same. 1923 and 1924 are the same.
Ford Touring—1915 and 1916 are the same. 1917 to and including 1921 are the same. 1922 takes one pattern. 1923 and 1924 are the same.
Ford Coupe—1917, 1918 and 1919 are the same. 1920, 1921 and early 1922 are the same. Late 1922 and 1923 are the same. 1924 takes a separate pattern.
Ford Sedan—1917, 1918 and 1919 are the same. 1920 takes one pattern. 1921 takes one pattern. Early 1922 takes one pattern. Late 1922, 1923 and 1924 are the same, but be sure and state if for two or four door.

Full Dress Seat Covers or Ford Cars, List Prices

All materials bearing the same prefix letter are the same price regardless of the pattern of cloth.

List Prices per Set		MATERIALS					
		M	R and X	Y	A	C	E
Ford Roadster	Lots of 12 Sets, per Set	$ 7.73	$ 8.60	$ 8.76	$ 8.92	$11.79	$13.68
Ford Roadster	Less than 12 Sets, per Set	8.35	9.29	9.46	9.64	12.74	14.78
Ford Touring	Lots of 12 Sets, per Set	15.11	15.93	16.25	16.57	22.12	25.81
Ford Touring	Less than 12 Sets, per Set	16.32	17.21	17.55	17.90	23.89	27.88
Ford Coupe	Lots of 12 Sets, per Set	8.98	10.01	10.17	10.41	13.78	16.01
Ford Coupe	Less than 12 Sets, per Set	9.70	10.81	10.99	11.24	14.88	17.29
Ford Sedan	Lots of 12 Sets, per Set	17.45	19.28	19.65	19.99	26.05	30.06
Ford Sedan	Less than 12 Sets, per Set	18.85	20.82	21.22	21.59	28.14	32.47

Full Dress Seat Covers for Chevrolet Superior 1923 and 1924 Models Only, List Prices

List Price per Set — See Class One for Chevrolet 490 Models

For Lots of 12 Sets Deduct 5%		MATERIALS					
		M	R and X	Y	A	C	E
Chevrolet Superior Roadster	Per Set	$ 9.11	$10.01	$10.18	$10.35	$13.28	$15.25
Chevrolet Superior Touring	Per Set	19.07	21.18	21.60	22.02	29.11	33.84
Chevrolet Superior Coupe	Per Set	11.22	12.60	12.86	13.11	17.55	20.51
Chevrolet Superior Sedan	Per Set	19.58	21.83	22.28	22.70	30.07	34.96

Class One Full Dress Seat Covers, List Prices

Following is list of cars in Class One: Allen, Buick 4 cyl., Chevrolet—490 model only, Essex, Gardner, Grant, Gray, Hupmobile, Maxwell, Nash 4 cyl., Oakland, Oldsmobile 4 cyl., Overland 4 cyl., Saxon (except Duplex), Star, Studebaker Light Six, and Willys-Knight, 2 or 5 passenger.

List Price per Set For Lots of 12 Sets Deduct 5%		MATERIALS					
		M	R and X	Y	A	C	E
All 2 or 3-Passenger Open Cars	Per Set	$11.67	$12.60	$12.81	$12.99	$16.14	$18.39
All 4 or 5-Passenger Open Cars	Per Set	21.48	23.58	23.94	24.39	31.23	35.73
All 2 or 3-Passenger Enclosed Cars	Per Set	15.18	16.29	16.50	16.71	20.31	22.71
All 4 or 5-Passenger Enclosed Cars	Per Set	22.56	24.84	25.26	25.71	33.09	37.98

Class Two Full Dress Seat Covers, List Prices

All cars not listed above in Class One will be priced as Class Two cars

List Price per Set For Lots of 12 Sets Deduct 5%		MATERIALS					
		M	R and X	Y	A	C	E
All 2 or 3-Passenger Open Cars	Per Set	$14.72	$15.93	$16.15	$16.39	$20.24	$22.88
All 4 or 5-Passenger Open Cars	Per Set	25.68	28.38	28.90	29.40	38.25	44.12
All 7-Passenger Open Cars	Per Set	33.25	36.05	36.55	37.07	46.08	52.10
All 2 or 3-Passenger Enclosed Cars	Per Set	21.15	23.07	23.82	24.22	31.52	36.33
All 4 or 5-Passenger Enclosed Cars	Per Set	27.36	30.61	31.21	31.83	42.41	49.46
All 7-Passenger Enclosed Cars	Per Set	35.61	39.50	40.18	40.92	53.50	61.85

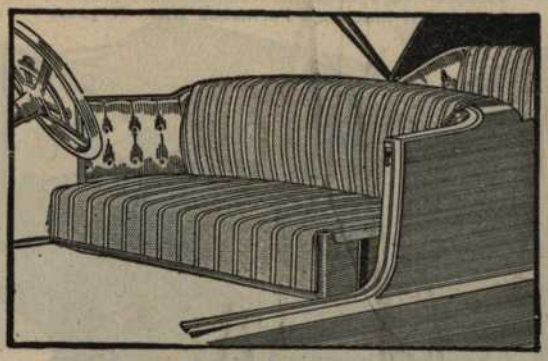
Orders for 12 or more sets assorted for different cars will take 5% quantity discount.

In Ordering Be Sure and Specify Material, Make of Car, Model Number, Year and Passenger Capacity

Economy Slips, "Baker Quality"

For description of materials see page 85.

We can furnish you Economy Slips made from all styles of materials we carry in stock.



Cushion covers lace on under side the same as regular seat covers.

Japanned saddle nails with large heads are used to attach the lazy back cover.

Each set comes packed in a neat, strong cardboard box suitable for mailing.

Construction of Economy Slips

Baker Quality Economy Slips are furnished full size, covering the entire width and length of back and cushion, they do not cover the sides or doors. The cushion cover is made from our regular seat cover pattern and laces on in the same manner. The cover for the lazy back is made seperate from the cushion and is equipped with cloth strips at the bottom so that it can be stretched down tightly and tacked to place. When properly put on will not pull up or wrinkle. The edges are turned and hemmed and the top of lazy back is attached by means of Japanned Saddle nails with large heads.
Economy Slips protect the clothing, have a good appearance and are low in price.
Classification of Economy Slips—We are listing Economy Slips for Ford and Chevrolet Superior Model Cars separately, all other cars are shown in another list.

Directions for Ordering Economy Slips for Ford Cars

On account of changes made in Ford models covering different years it is necessary to give us the year car was made as well as the model.

Different Patterns Are as Follows for Ford Cars

Ford Roadster—1915 and 1916 are the same; 1917 to and including 1922 are the same; 1923 and 1924 are the same.
Ford Touring—1915 and 1916 are the same; 1917 to and including 1921 are the same; 1922 takes one pattern; 1923 and 1924 are the same.
Ford Coupe—1917, 1918 and 1919 are the same; 1920, 1921 and early 1922 are the same; late 1922 and 1923 are the same; 1924 takes a separate pattern.
Ford Sedan—1917, 1918 and 1919 are the same; 1920 takes one pattern; 1921 takes one pattern; early 1922 takes one pattern; late 1922, 1923 and 1924 are the same, but be sure and state if for two or four door.

Economy Slips for Ford Cars, List Prices

All materials bearing the same prefix letter are the same price, regardless of the pattern of cloth.

List Price per Set		MATERIALS					
		M	R and X	Y	A	C	E
Ford Roadster	Lots of 12 Sets, per Set	$ 3.16	$ 3.52	$ 3.63	$ 3.68	$ 4.95	$ 7.46
Ford Roadster	Less than 12 Sets, per Set	3.41	3.80	3.92	3.97	5.35	8.06
Ford Touring	Lots of 12 Sets, per Set	6.25	7.12	7.30	7.46	7.74	12.32
Ford Touring	Less than 12 Sets, per Set	6.75	7.69	7.88	8.06	8.36	13.31
Ford Coupe	Lots of 12 Sets, per Set	4.32	5.02	5.12	5.27	5.45	8.92
Ford Coupe	Less than 12 Sets, per Set	4.67	5.42	5.53	5.69	5.89	9.63
Ford Sedan	Lots of 12 Sets, per Set	7.38	8.56	8.80	9.03	12.94	15.53
Ford Sedan	Less than 12 Sets, per Set	7.97	9.24	9.50	9.75	13.98	16.77

Economy Slips for Chevrolet Superior 1923 and 1924 Models Only, List Prices

See list below to secure price on 490 Model Chevrolet

List Prices per Set For Lots of 12 Sets Deduct 5%		MATERIALS					
		M	R and X	Y	A	C	E
Chevrolet Superior Roadster	Per Set	$ 3.65	$ 4.26	$ 4.35	$ 4.46	$ 6.40	$ 7.70
Chevrolet Superior Touring	Per Set	5.90	7.13	7.34	7.54	10.83	13.05
Chevrolet Superior Coupe	Per Set	4.00	4.68	4.81	4.92	7.16	8.63
Chevrolet Superior Sedan	Per Set	6.75	7.95	8.15	8.37	12.20	14.77

Economy Slips for All Cars Other Than Ford and Chevrolet Superior

In Ordering Specify Material, Make of Car, Model Number, Year Car Was Made and Passenger Capacity

The following prices do not include covers for Auxiliary Folding Seats, these must be ordered separately. See last two items below.
All materials bearing the same prefix letters are the same price, regardless of the pattern of cloth.

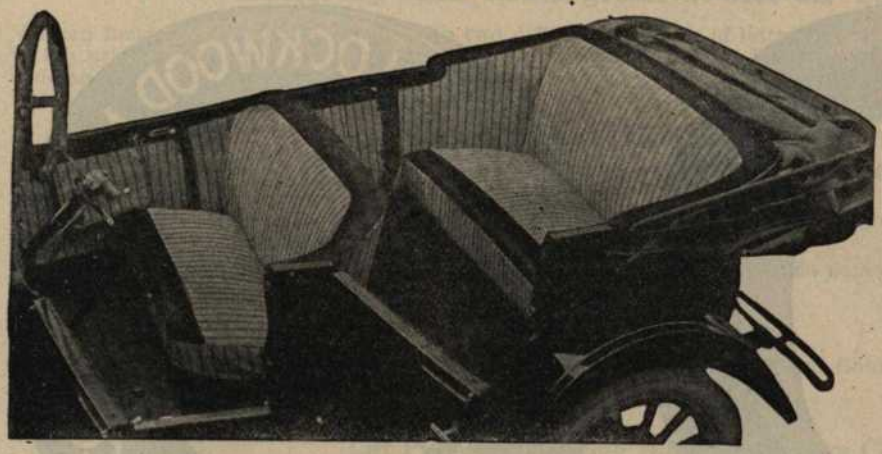
List Prices per Set For Lots of 12 Sets Deduct 5%		MATERIALS					
		M	R and X	Y	A	C	E
All 2 or 3-Passenger Open Cars	Per Set	$ 4.78	$ 5.51	$ 5.65	$ 5.79	$ 8.18	$ 9.79
All 2 or 3-Passenger Enclosed Cars	Per Set	5.60	6.30	6.47	6.61	9.00	10.60
All 4-5-7-Pass. Open or Encosed Cars	Per Set	8.69	10.01	10.24	10.52	14.79	17.63

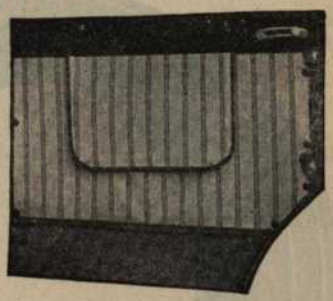
Economy Slips for Auxiliary Folding Seats

List Price per Set For Lots of 12 Sets Deduct 5%		MATERIALS					
		M	R and X	Y	A	C	E
Auxiliary Folding Seat Covers	Per Seat	$ 0.65	$ 0.73	$ 0.76	$ 0.79	$ 0.98	$ 1.72

Orders for 12 or more sets assorted for different cars will take 5% quantity discount.
Samples of Seat Cover Materials Furnished Upon Request.

Baker Art Seat Covers





The above illustration shows a door fitted with a Baker Art Cover. Note the wide art leather binding at the top, the flap being bound around the edges with the same material and color.

Baker Art Seat Covers are offered to those who wish seat covers with a more elaborate trimming than those shown on the preceding pages. For description of materials see page 85.

See Page 88 for Different Patterns Used on Ford Cars

Made to cover all cushions, backs, sides and doors and include kick pad or cover for back of front seat and cowl pieces. Wide art leather trimming is used throughout of suitable color to match material used. The art leather trim is 4 inches wide at top of arm rests and 2½ inches wide at top of lazy back covers, 4-inch pieces are used the full length of cushions at the front and 2-inch strips at the top of all door covers. Baker Art Covers are made with door covers provided with slot and flap, providing easy access to pockets in doors for all cars other than Fords, which have no pockets in doors, and for which we provide door covers with pockets. The flaps on all door covers as well as the door coverings are bound with the same color binding as art leather used on the rest of the covers.

Classification—We are listing Baker Art Seat Covers for Ford and Chevrolet Superior Model Cars separately. All other cars being divided into two classes, Class One for the small and medium size cars and the larger cars in Class Two.

☛ In Ordering Seat Covers Be Sure and Specify Material, Make of Car, Model Number, Year Car Was Made and Passenger Capacity

Baker Art Seat Covers for Ford Cars, List Prices

All materials bearing the same prefix letter are the same price, regardless of the pattern of cloth

List Price per Set For 12 Sets or More Deduct 5%		MATERIALS					
		M	R and X	Y	A	C	E
Ford Roadster	Lots of 12 Sets, per Set	$ 9.24	$10.11	$10.27	$10.43	$13.30	$15.29
Ford Roadster	Less than 12 Sets, per Set	9.98	10.91	11.10	11.26	14.36	16.51
Ford Touring	Lots of 12 Sets, per Set	18.11	18.93	19.25	19.57	25.12	28.81
Ford Touring	Less than 12 Sets, per Set	19.55	20.44	20.79	21.13	27.21	31.11
Ford Coupe	Lots of 12 Sets, per Set	10.92	11.95	12.11	12.35	15.72	17.95
Ford Coupe	Less than 12 Sets, per Set	11.79	12.90	13.07	13.34	16.97	19.49
Ford Sedan	Lots of 12 Sets, per Set	20.15	21.98	22.35	22.69	28.75	32.76
Ford Sedan	Less than 12 Sets, per Set	21.76	24.13	24.33	24.50	31.05	35.38

Baker Art Seat Covers for Chevrolet Superior 1923 and 1924 Models Only, List Prices

List Price per Set For 12 Sets or More Deduct 5%	See Class One for Chevrolet 490 Models	MATERIALS					
		M	R and X	Y	A	C	E
Chevrolet Superior Roadster	Per Set	$10.76	$11.66	$11.83	$12.00	$14.93	$16.90
Chevrolet Superior Touring	Per Set	22.22	24.33	24.75	25.17	32.26	36.99
Chevrolet Superior Coupe	Per Set	13.47	14.85	15.11	15.36	19.80	22.76
Chevrolet Superior Sedan	Per Set	22.58	24.83	25.28	25.70	33.07	37.96

Class One Baker Art Seat Covers, List Prices

The following cars are in Class One: Allen, Buick 4 cyl., Chevrolet—490 models only, Essex, Gardner, Grant, Gray, Hupmobile, Maxwell, Nash 4 cyl., Oakland, Oldsmobile 4 cyl., Saxon (except Duplex), Star, Studebaker Light Six, and Willys-Knight, 2 or 5-passenger.

List Prices per Set For 12 Sets or More Deduct 5%		MATERIALS					
		M	R and X	Y	A	C	E
All 2 or 3-Passenger Open Cars	Per Set	$13.14	$14.33	$14.54	$14.72	$17.87	$20.12
All 4 or 5-Passenger Open Cars	Per Set	24.73	26.83	27.19	27.64	34.48	38.98
All 2 or 3-Passenger Enclosed Cars	Per Set	17.67	18.78	18.99	19.20	22.80	25.20
All 4 or 5-Passenger Enclosed Cars	Per Set	25.80	28.09	28.51	28.96	36.34	41.23

Class Two Baker Art Seat Covers, List Prices

All cars not listed above in Class One will be priced as Class Two Cars

List Prices per Set For 12 Sets or More Deduct 5%		MATERIALS					
		M	R and X	Y	A	C	E
All 2 or 3-Passenger Open Cars	Per Set	$17.08	$18.29	$18.51	$18.75	$22.60	$25.24
All 4 or 5-Passenger Open Cars	Per Set	29.55	32.25	32.77	33.27	42.12	47.99
All 7-Passenger Open Cars	Per Set	37.94	40.74	41.24	41.76	50.77	56.79
All 2 or 3-Passenger Enclosed Cars	Per Set	23.83	25.75	26.50	26.90	34.20	39.01
All 4 or 5-Passenger Enclosed Cars	Per Set	31.23	34.48	35.08	35.70	46.28	53.33
All 7-Passenger Enclosed Cars	Per Set	39.86	43.75	44.43	45.17	57.75	66.10

Samples of Materials Furnished Upon Request.

Baker Quality Tire Covers

The Above Illustration Shows Our No. 1100 Series Tire Covers, Both Plain and with Advertising

No. 1100 is an all black cover.
No. 1101A has black side walls with a single white tread band.
No. 1104A has black side walls with two narrow white beads, one on each side of black tread band.

Description of No. 1100 Series Tire Covers

This style of Tire Cover is the most popular, as it will fit all tires regardless of how carried, covers the tire complete, but not the rim. Overlaps at ends sufficient to allow for variations in the different makes of tires. Strongly sewed, reinforced under glove fasteners, three rows of which are furnished on all covers except 30x3½ inch, which have two rows. Drain holes are provided to drain out the water.

Description of Materials

Baker Quality Tire Covers are furnished in the following materials, ranging from the popular low-priced drill to the finest patent leather finish:

Enamel Drill—Bright grained finish.

Meritas Duck—Bright enamel grained finish.

No. 10—Patent leather finish, medium weight drill.

No. 30—Patent leather finish, Meritas duck.

No. 40—Patent leather finish, Pyroxlin coated with colored sateen back, the highest grade patent leather finish manufactured and used in tire covers.

Khaki Army Duck—This material will meet the demand for tire covers to go with khaki tops now furnished on a number of sport model cars.

Size of Tire Covers

As cord tires are now regular equipment on all cars excepting those using 30x3½ inch, we are listing our tire covers to fit cord tires only. **We will ship all tire covers to fit cord tires of the sizes given on order unless otherwise specified.**

On account of the variation in size of the different makes of cord tires made to fit the same size rim, it is well where possible to give us the make of the tire the cover is to fit.

Advertising Tire Covers

This method of advertising has gained in popularity and is a very successful as well as economical means of attracting public attention.

We furnish our lettering on tire covers in a number of different colors, which were selected as most suitable for the purpose intended. They can be read easily while car is in motion and at quite a distance.

IT PAYS TO ADVERTISE WITH BAKER QUALITY TIRE COVERS.

Our BAKER CHROME ART WORK on tire covers is used for monograms and where special lettering or designs are wanted.

Prices for printing and Baker Chrome Art Work on tire covers shown on next page.

Lettering and Monogram Work on Tire Covers

We can furnish lettered tire covers with two different methods of lettering, the price of either method to be added to the price of the style and grade tire cover selected. Prices for lettering are scaled according to the quantity ordered.

Printed Tire Covers

Plain block letters, using type of various sizes but not more than 2½ inches in height. The size type used will be governed by the number of letters to be used and the space available.

We can print the following Monograms and Trade Names in solid colors as shown below, counting the letters in each as part of a line, a line consisting of 20 letters or less:

Star monogram, Buick trade name, Chevrolet trade name and Ford trade name.

Colors Used in Printing

Our printing is done in any one of the following solid colors: Aluminum, Gold, Red Orange, White and Yellow. When order does not specify color wanted we will use Aluminum.

List Prices for Printing All Styles of Tire Covers

The list prices given below to be added to the list price of tire cover selected.
A line of printing consists of 20 letters or less in one place on a tire cover, in any one solid color shown above. Letters not to be over 2½ inches in height.

Printing Tire Covers in Lots of	1 to 3	6	12	25	50	100	250	500
List Price, per Line	$1.25	$0.79	$0.40	$0.35	$0.27	$0.23	$0.18	$0.16

Write us for special prices for printing No. 450 Quarter Drum Tire Covers if wanted in lots of 50 or more.

Letters Larger Than 2½ Inches on No. 1800 or No. 900 Tire Covers

Our No. 1800 Full Drum and No. 900 Half Drum Tire Covers have more available space than any of our other styles and larger letters can be used if wanted. Furnished in plain block letters or script.

Colors furnished are as follows: Aluminum, Gold, Red Orange, White and Yellow. When order does not specify color wanted we will use Aluminum.

4-inch Letters not to exceed 15 letters in one line in one place on a tire cover, in any one solid color shown.
6-inch Letters not to exceed 10 letters in one line in one place on a tire cover, in any one solid color shown.

List Prices for 4 and 6-Inch Letters on No. 1800 and No. 900 Tire Covers

The list prices given below to be added to the list price of Tire Covers selected

In Lots of	1 to 3	6	12	25	50	100	250	500
4-inch Letters, List Price per Line	$1.67	$1.40	$1.20	$0.47	$0.36	$0.32	$0.24	$0.22
6-inch Letters, List Price per Line	1.67	1.40	1.20	.47	.36	.32	.24	.22

Baker Chrome Art Work

With this method we can duplicate monograms and trade names for popular makes of cars, plain or in color as used by the various car manufacturers. Lettering is also done by this process in plain block letters or in script. Lettering is furnished in any of the colors shown above and we only list lettering done by this method in lots of 25 or more, monograms and trade names can be done in any quantity.

List Prices for Lettering in Baker Chrome Art

The list prices given below to be added to the list prices of Tire Covers selected.
A line consists of 20 letters or less in one place on tire cover in any one solid color as shown above.

Baker Chrome Art Lettering, in Lots of	25	50	100	250	500
List Price per Line	$0.79	$0.56	$0.41	$0.34	$0.27

List Prices for Monograms and Trade Names in Baker Chrome Art

The list prices given below to be added to the list price of Tire Covers selected

Small Monograms and Trade Names as used on No. 1100 Series Tire Covers.

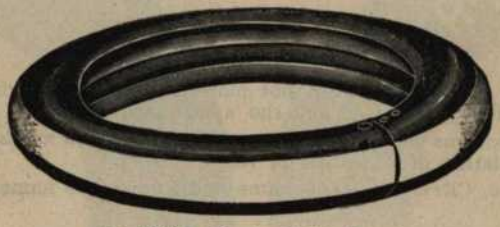
In lots of	1 to 3	6	12	25	50	100	250	500
List Price, Each	$0.55	$0.50	$0.45	$0.44	$0.42	$0.40	$0.38	$0.36

Large Monograms and Trade Names as Used on No. 1800 and No. 900 Tire Covers.

In lots of	1 to 3	6	12	25	50	100	250	500
List Price, Each	$0.80	$0.75	$0.70	$0.65	$0.60	$0.57	$0.55	$0.50

No. 1100 Series Tire Covers

Baker Quality



No. 1101A—Single White Band

No. 1100—All Black

No. 1104A—Double White Bead

As cord tires are now regular equipment on all cars excepting those using 30x3½-inch, we are listing our Tire Covers to fit cord tires only. For description of materials see page 90.

In Ordering Give Us The Tire Size. We Will Ship Covers To Fit Cord Tires of The Size Given On Order, If Wanted For Fabric Tires Give Tire Size and Write Fabric After The Size. Give Make of Tire Where Possible.

No. 1100 All Black Tire Covers, List Prices

Tire Covers to Fit Tire Sizes Given Below:	MATERIALS. Enamel Drill Lots of 12 Each	Enamel Drill Less than 12 Each	Enamel Duck Lots of 12 Each	Enamel Duck Less than 12 Each	Long Grain Topping Lots of 12 Each	Long Grain Topping Less than 12 Each	No. 10 Pat. Leather Lots of 12 Each	No. 10 Pat. Leather Less than 12 Each	No. 30 Pat. Leather Lots of 12 Each	No. 30 Pat. Leather Less than 12 Each	No. 40 Pat. Lea. or Khaki Duck Lots of 12 Each	No. 40 Pat. Lea. or Khaki Duck Less than 12 Each
30x3½ Regular Cord or Fabric	$1.87	$2.06	$2.32	$2.55	$2.32	$2.55	$1.92	$2.11	$2.37	$2.61	$4.53	$4.99
31x4 Cord or 30x3½ Oversize Cord	2.40	2.64	2.97	3.27	2.97	3.27	2.46	2.71	3.02	3.32	5.27	5.80
32x4 Cord	2.43	2.68	3.02	3.32	3.02	3.32	2.48	2.73	3.08	3.39	5.32	5.85
32x4½ Cord	2.56	2.82	3.18	3.50	3.18	3.50	2.62	2.88	3.26	3.59	5.71	6.28
33x4 Cord	2.56	2.82	3.18	3.50	3.18	3.50	2.62	2.88	3.26	3.59	5.71	6.28
33x4½ Cord	2.59	2.85	3.23	3.56	3.23	3.56	2.64	2.91	3.56	3.91	5.77	6.35
33x5 Cord	3.09	3.40	3.88	4.27	3.88	4.27	3.09	3.40	3.97	4.37	6.86	7.55
34x4 Cord	2.72	2.99	3.39	3.73	3.39	3.73	2.81	3.09	3.45	3.80	6.00	6.60
34x4½ Cord	2.81	3.09	3.48	3.83	3.48	3.83	2.90	3.19	3.57	3.93	6.17	6.79
35x4½ Cord	2.87	3.16	3.57	3.93	3.57	3.93	2.93	3.23	3.63	4.00	6.26	6.89
35x5 Cord	3.33	3.67	4.15	4.57	4.15	4.57	3.42	3.76	4.24	4.67	7.58	8.34
36x4½ Cord	2.95	3.25	3.69	4.06	3.69	4.06	3.01	3.31	3.71	4.08	6.41	7.05
37x5 Cord	3.42	3.76	4.27	4.70	4.27	4.70	3.48	3.83	4.36	4.80	7.87	8.66

New Balloon Sizes.
Owing to late changes in manufacture and designation of sizes of Balloon Tires, we are unable to include list in this catalog. Write for special prices giving details of tires for which you wish covers.

No. 1101A Single White Band, List Prices

Tire Covers to Fit Tire Sizes Given Below:												
30x3½ Regular Cord or Fabric	$2.02	$2.21	$2.47	$2.70	$2.47	$2.70	$2.07	$2.26	$2.52	$2.76	$4.68	$5.14
31x4 Cord or 30x3½ Oversize Cord	2.55	2.79	3.12	3.42	3.12	3.42	2.61	2.86	3.17	3.47	5.42	5.95
32x4 Cord	2.63	2.88	3.22	3.52	3.22	3.52	2.68	2.93	3.28	3.59	5.52	6.05
32x4½ Cord	2.76	3.02	3.38	3.70	3.38	3.70	2.82	3.08	3.46	3.79	5.91	6.48
33x4 Cord	2.76	3.02	3.38	3.70	3.38	3.70	2.82	3.08	3.46	3.79	5.91	6.48
33x4½ Cord	2.79	3.05	3.43	3.76	3.43	3.76	2.84	3.11	3.76	4.11	5.97	6.55
33x5 Cord	3.29	3.60	4.08	4.47	4.08	4.47	3.29	3.60	4.17	4.57	7.06	7.75
34x4 Cord	2.96	3.23	3.63	3.97	3.63	3.97	3.05	3.33	3.69	4.04	6.24	6.84
34x4½ Cord	3.05	3.33	3.72	4.07	3.72	4.07	3.14	3.43	3.81	4.17	6.41	7.03
35x4½ Cord	3.14	3.43	3.84	4.20	3.84	4.20	3.20	3.50	3.90	4.27	6.53	7.16
35x5 Cord	3.60	3.94	4.42	4.84	4.42	4.84	3.69	4.03	4.51	4.94	7.85	8.61
36x4½ Cord	3.22	3.52	3.96	4.33	3.96	4.33	3.28	3.58	3.98	4.35	6.68	7.31
37x5 Cord	3.69	4.03	4.54	4.97	4.54	4.97	3.75	4.10	4.63	5.07	8.14	8.93

New Balloon Sizes.
Owing to late changes in manufacture and designation of sizes of Balloon Tires, we are unable to include list in this catalog. Write for special prices giving details of tires for which you wish covers.

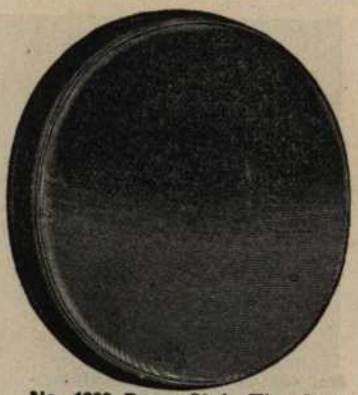
No. 1104A Double White Bead, List Prices

Tire Covers to Fit Tire Sizes Given Below:												
30x3½ Regular Cord or Fabric	$2.14	$2.33	$2.59	$2.82	$2.59	$2.82	$2.19	$2.38	$2.64	$2.88	$4.80	$5.26
31x4 Cord or 30x3½ Oversize Cord	2.67	2.91	3.24	3.54	3.24	3.54	2.73	2.98	3.29	3.59	5.54	6.07
32x4 Cord	2.77	3.02	3.36	3.66	3.36	3.66	2.82	3.07	3.42	3.73	5.66	6.19
32x4½ Cord	2.93	3.19	3.55	3.87	3.55	3.87	2.99	3.25	3.63	3.96	6.08	6.65
33x4 Cord	2.93	3.19	3.55	3.87	3.55	3.87	2.99	3.25	3.63	3.96	6.08	6.65
33x4½ Cord	2.96	3.22	3.60	3.93	3.60	3.93	3.01	3.28	3.93	4.28	6.14	6.72
33x5 Cord	3.50	3.81	4.29	4.68	4.29	4.68	3.56	3.88	4.38	4.78	7.27	7.96
34x4 Cord	3.13	3.40	3.80	4.14	3.80	4.14	3.22	3.50	3.86	4.21	6.41	7.01
34x4½ Cord	3.22	3.50	3.89	4.24	3.89	4.24	3.31	3.60	3.98	4.34	6.58	7.20
35x4½ Cord	3.37	3.66	4.07	4.43	4.07	4.43	3.48	3.73	4.13	4.50	6.76	7.39
35x5 Cord	3.83	4.17	4.65	5.07	4.65	5.07	3.92	4.26	4.74	5.17	8.08	8.84
36x4½ Cord	3.45	3.75	4.19	4.56	4.19	4.56	3.51	3.81	4.21	4.58	6.91	7.55
37x5 Cord	3.92	4.26	4.77	5.20	4.77	5.20	3.98	4.33	4.86	5.30	8.37	9.16

New Balloon Sizes.
Owing to late changes in manufacture and designation of sizes of Balloon Tires, we are unable to include list in this catalog. Write for special prices giving details of tires for which you wish covers.

PRICES FOR LETTERING ANY OF THE ABOVE TIRE COVERS SHOWN ON PAGE 91.

Baker Quality Tire Covers



No. 1800 Drum Style Tire Cover.

Showing large and small sizes of No. 1800 Drum Style Tire Covers.

This style tire cover is not adjustable. We must have exact size of tire (give us maker's name if possible) and if cord or fabric.

No. 1800 Drum Style With Advertising.

The No. 1800 Drum Style Tire Cover is for use on tires mounted on rims or on wire wheels, held in place by a spiral spring which insures a snug fit, covers the entire outside half of the tire and extends over tread to inside edge of rim.

A very practical Tire Cover for advertising purposes on account of the large amount of space available.

Cutouts for license plate and tail lights, covered with celluloid, can be furnished. See directions for ordering given below.

For Description of Materials see Page 90

Directions for Ordering No. 1800 Drum Style Tire Covers

We always ship Tire Covers to fit cord tires of the size given on order; if wanted for fabric tires, give tire size and write fabric after the size. This style Tire Cover is not adjustable, and for this reason where possible give us make of tire cover is to fit.

No. 1800 Drum Style Tire Covers, List Prices

Tire Covers to Fit Tire Sizes Given Below:	MATERIALS. Enamel Drill		Enamel Duck		Long Grain Topping		No. 10 Pat. Leather		No. 30 Pat. Leather		No. 40 Pat. Lea. or Khaki Duck	
	Lots of 12 Each	Less than 12 Each	Lots of 12 Each	Less than 12 Each	Lots of 12 Each	Less than 12 Each	Lots of 12 Each	Less than 12 Each	Lots of 12 Each	Less than 12 Each	Lots of 12 Each	Less than 12 Each
30x3½ Fabric	$2.43	$2.56	$2.85	$3.00	$2.85	$3.00	$2.50	$2.63	$2.91	$3.06	$3.65	$3.84
30x3½ Regular Cord	2.53	2.66	3.00	3.16	3.00	3.16	2.57	2.71	3.05	3.21	3.85	4.05
31x4 Cord or 30x3½ Oversize Cord	2.70	2.84	3.18	3.35	3.18	3.35	2.75	2.89	3.26	3.43	4.09	4.30
32x4 Cord	2.72	2.86	3.18	3.35	3.18	3.35	2.78	2.92	3.26	3.43	4.11	4.32
32x4½ Cord	2.91	3.06	3.42	3.60	3.42	3.60	2.97	3.12	3.48	3.66	4.44	4.67
33x4 Cord	2.97	3.12	3.48	3.66	3.48	3.66	3.02	3.18	3.53	3.71	4.51	4.75
33x4½ Cord	3.02	3.18	3.53	3.71	3.53	3.71	3.07	3.23	3.61	3.80	4.60	4.84
33x5 Cord	3.07	3.23	3.63	3.82	3.63	3.82	3.13	3.29	3.69	3.88	4.73	4.98
34x4 Cord	3.20	3.37	3.75	3.95	3.75	3.95	3.25	3.42	3.84	4.04	4.90	5.15
34x4½ Cord	3.25	3.42	3.81	4.01	3.81	4.01	3.31	3.48	3.93	4.13	4.98	5.24
35x4½ Cord	3.28	3.45	3.84	4.04	3.84	4.04	3.33	3.51	3.95	4.16	5.01	5.27
35x5 Cord	3.33	3.51	3.97	4.18	3.97	4.18	3.42	3.60	4.06	4.27	5.23	5.50
36x4½ Cord	3.36	3.54	3.92	4.13	3.92	4.13	3.42	3.60	4.03	4.24	5.08	5.35
37x5 Cord	4.53	4.77	6.59	5.88	5.59	5.88	4.65	4.89	5.73	6.03	7.65	8.05

New Balloon Sizes.

Owing to late changes in manufacture and designation of sizes of Balloon Tires, we are unable to include list in this catalog. Write for special prices giving details of tires for which you wish covers.

For License Plate and Tail Light Cut Outs Covered with Celluloid

In Ordering Specify Tire Size and if Cord or Fabric (Make of Tire if Possible) Make of Car, Year and Model Number

ADD TO LIST PRICE OF TIRE COVER	List Price
For License Plate cut out with Celluloid....Each	$1.13
For Tail Light cut out with Celluloid....Each	.68

Prices for lettering No. 1800 Tire Covers shown on page 91.
Samples of Tire Cover materials furnished upon request.

Baker Quality Advertising Tire Covers

No. 900 Half Drum Style.

No. 450 Quarter Drum Style.

The above illustrations show tire covers especially designed for advertising purposes, the No. 900 half drum is made with the lower half the same as our No. 1100 tire covers, the upper half being available for lettering. The No. 450 quarter drum is made exactly like our No. 1100 style with the exception of the top outside section which is cut straight across instead of rounded, leaving room for two extra lines of lettering, if wanted.

For description of materials see page 90.

In Ordering Give Us the Tire Size and Material Wanted. We Will Ship Covers to Fit Cord Tires of Size Given on Order. If Wanted for Fabric Tires, Give Tire Size and Write Fabric After the Size. Give Make of Tire Where Possible.

Prices given below are for tire covers only. The prices for lettering, which are to be added to the price of tire covers, are shown on page 91.

No. 900 Half Drum Tire Covers, List Prices

Tire Covers to Fit Tire Sizes Given Below:	MATERIALS. Enamel Drill		Enamel Duck		Long Grain Topping		No. 10 Pat. Leather		No. 30 Pat. Leather	
	Lots of 12 Each	Less than 12 Each	Lots of 12 Each	Less than 12 Each	Lots of 12 Each	Less than 12 Each	Lots of 12 Each	Less than 12 Each	Lots of 12 Each	Less than 12 Each
30x3½ Fabric	$2.19	$2.31	$2.57	$2.70	$2.57	$2.70	$2.25	$2.37	$2.62	$2.76
30x3½ Regular Cord	2.28	2.40	2.70	2.85	2.70	2.85	2.32	2.44	2.75	2.89
31x4 Cord or 30x3½ Oversize Cord	2.43	2.56	2.87	3.02	2.87	3.02	2.48	2.61	2.94	3.09
32x4 Cord	2.45	2.58	2.87	3.02	2.87	3.02	2.51	2.63	2.94	3.09
32x4½ Cord	2.62	2.76	3.08	3.24	3.08	3.24	2.68	2.81	3.14	3.30
33x4 Cord	2.68	2.81	3.14	3.30	3.14	3.30	2.72	2.87	3.18	3.34
33x4½ Cord	3.02	2.87	3.18	3.34	3.18	3.34	2.77	2.91	3.25	3.42
33x5 Cord	2.77	2.91	3.27	3.44	3.27	3.44	2.82	2.97	3.33	3.50
34x4 Cord	2.88	3.04	3.38	3.56	3.38	3.56	2.93	3.08	3.46	3.64
34x4½ Cord	2.93	3.08	3.43	3.61	3.43	3.61	2.98	3.14	3.54	3.72
35x4½ Cord	2.96	3.11	3.46	3.64	3.46	3.64	3.00	3.16	3.56	3.75
35x5 Cord	3.00	3.16	3.58	3.77	3.58	3.77	3.08	3.24	3.66	3.85
36x4½ Cord	3.03	3.19	3.53	3.72	3.53	3.72	3.08	3.24	3.63	3.85
37x5 Cord	4.08	4.30	5.04	5.30	5.04	5.30	4.19	4.41	5.16	5.43

No. 450 Quarter Drum Tire Covers, List Prices

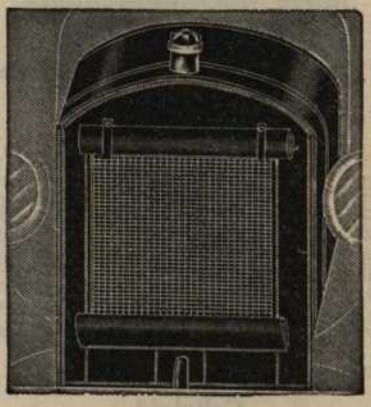
30x3½ Fabric	$1.87	$2.06	$2.32	$2.55	$2.32	$2.55	$1.92	$2.11	$2.37	$2.61
30x3½ Regular Cord	1.87	2.06	2.32	2.55	2.32	2.55	1.92	2.11	2.37	2.61
31x4 Cord or 30x3½ Oversize Cord	2.40	2.64	2.97	3.27	2.97	3.27	2.46	2.71	3.02	3.32
32x4 Cord	2.43	2.68	3.02	3.32	3.02	3.32	2.48	2.73	3.08	3.39
32x4½ Cord	2.56	2.82	3.18	3.50	3.18	3.50	2.62	2.88	3.26	3.59
33x4 Cord	2.56	2.82	3.18	3.50	3.18	3.50	2.62	2.88	3.26	3.59
33x4½ Cord	2.59	2.85	3.23	3.56	3.23	3.56	2.64	2.91	3.56	3.91
33x5 Cord	3.09	3.40	3.88	4.27	3.88	4.27	3.09	3.40	3.97	4.37
34x4 Cord	2.72	2.99	3.39	3.73	3.39	3.73	2.81	3.09	3.45	3.80
34x4½ Cord	2.81	3.09	3.48	3.83	3.48	3.83	2.90	3.19	3.57	3.93
35x4½ Cord	2.87	3.16	3.57	3.93	3.57	3.93	2.93	3.23	3.63	4.00
35x5 Cord	3.33	3.67	4.15	4.57	4.15	4.57	3.42	3.76	4.24	4.67
36x4½ Cord	2.95	3.25	3.69	4.06	3.69	4.06	3.01	3.31	3.71	4.08
37x5 Cord	3.42	3.76	4.27	4.70	4.27	4.70	3.48	3.83	4.36	4.80

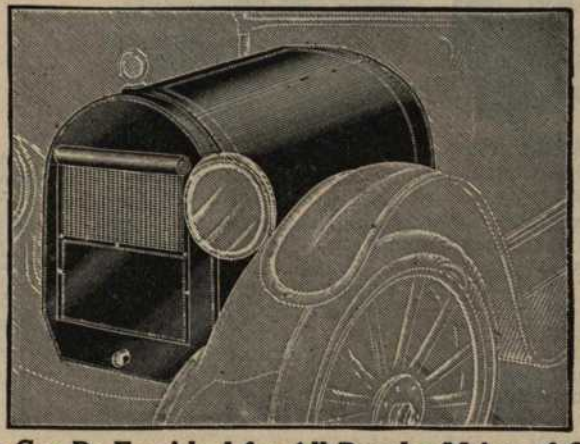
PRICES FOR LETTERING ABOVE TIRE COVERS SHOWN ON PAGE 91. IF A PRINTED JOB IS WANTED IN LOTS OF 50 OR MORE WRITE US FOR SPECIAL PRICES.

SAMPLES OF MATERIALS FURNISHED UPON REQUEST.

Radiator and Hood Covers

"BAKER QUALITY"





Baker Quality Radiator and Hood Covers Can Be Furnished for All Popular Makes of Cars

Construction

All Radiator Covers have double front curtains, allowing either half or both curtains to be opened or closed as needed. Straps and glove fasteners are provided for adjustment. Long front protects bottom of radiator. A strap and snap fastener is provided on all Radiator Covers which allows the cover to slip over bar caps or motometers.

Description of Materials

No. 6—Dull finish waterproof enamel muslin, lined with felted Kersey lining.
No. 24—Medium topping material, lined with felted Kersey lining.
No. 33—Heavy long grain topping, lined with felted Kersey lining.
No. 36—Highest grade French topping with double gray felt lining.

In Ordering Specify Year and Model, Number of Car.

Classification
For Ford Cars

List Price

Material	No. 6 Rad. Only	No. 6 Hood and Rad.	No. 24 Rad. Only	No. 24 Hood and Rad.	No. 33 Rad. Only	No. 33 Hood and Rad.	No. 36 Rad. Only	No. 36 Hood and Rad.
Dozen Lots, Per Cover	$ 1.83	$ 3.65	$ 2.15	$ 4.30	$ 2.36	$ 4.71	$ 3.55	$ 7.09
Less than Dozen Lots, Per Cover	1.92	3.83	2.26	4.51	2.48	4.95	3.72	7.44

Class One Cars

Chevrolet 490 and Superior, Gray, Overland 4, Red Bird and Star.

List Price

Material	No. 24 Rad. Only	No. 24 Hood and Rad.	No. 33 Rad. Only	No. 33 Hood and Rad.	No. 36 Rad. Only	No. 36 Hood and Rad.
In Dozen Lots, Per Cover	$ 3.65	$ 7.57	$ 3.77	$ 8.09	$ 4.34	$ 9.78
Less than Dozen Lots, Per Cover	3.84	7.97	3.97	8.51	4.57	10.29

Class Two Cars

Allen, Briscoe Buick 4, Chevrolet Baby Grand, Dodge, Dort, Durant 4, Earl, Essex, Gardner, Hupmobile, Maxwell, Monroe, Nash 4, Oakland, Oldsmobile 4, Saxon, Studebaker 4 and Light 6.

List Price

Material	No. 24 Rad. Only	No. 24 Hood and Rad.	No. 33 Rad. Only	No. 33 Hood and Rad.	No. 36 Rad. Only	No. 36 Hood and Rad.
In Dozen Lots, Per Cover	$ 4.04	$ 8.29	$ 4.22	$ 8.85	$ 4.97	$10.83
Less than Dozen Lots, Per Cover	4.25	8.72	4.44	9.31	5.23	11.39

Class Three Cars

Auburn, Buick 6, Chalmers, Cleveland, Crow-Elkhart, Dupont, Durant 6, Elgin, Harroun, Grant, Jewett, Lexington, Liberty, Lorrain, Mitchell, Nash 6, Oldsmobile 6 and 8, Overland 6, Packard Single 6, Paige Models 38 to 44, R. & V. Knight 4 cyl., Reo, Scripps-Booth, Stearns-Knight 4 cyl., Stephens, Studebaker Special and Big 6, Velie, Willys-Knight.

List Price

Material	No. 24 Rad. Only	No. 24 Hood and Rad.	No. 33 Rad. Only	No. 33 Hood and Rad.	No. 36 Rad. Only	No. 36 Hood and Rad.
In Dozen Lots, Per Cover	$ 4.56	$ 9.26	$ 4.82	$ 9.92	$ 5.67	$12.23
Less than Dozen Lots, Per Cover	4.80	9.75	5.07	10.44	5.97	12.87

Class Four Cars

All cars not listed above are in Class Four.

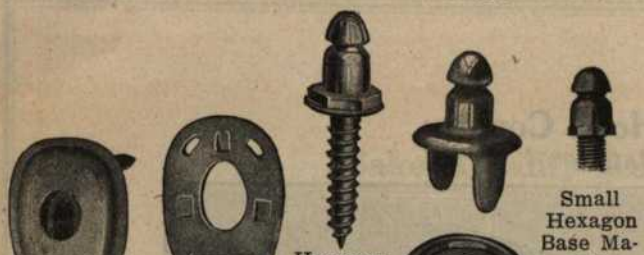
List Price

Material	No. 24 Rad. Only	No. 24 Hood and Rad.	No. 33 Rad. Only	No. 33 Hood and Rad.	No. 36 Rad. Only	No. 36 Hood and Rad.
In Dozen Lots, Per Cover	$ 5.13	$ 9.88	$ 5.51	$10.45	$ 6.58	$12.96
Less than Dozen Lots, Per Cover	5.50	10.39	5.80	11.00	6.93	13.64

Note—To secure the dozen lot price we must have order for one dozen radiator covers only or one dozen complete sets, assorted models if desired.

Samples Furnished upon Request

Lift the Dot Curtain Fasteners



Regular Socket No. N608 (With No. 708A Clinch Plate)

Hexagon Base Wood Screw Stud No. 852

Clinch Stud No. 895

Small Hexagon Base Machine Screw No. 680 for Windshields, etc.(8-32)

One socket and clinch plate is included with each single stud; two with each double stud.

No.	For	Head	Per 100
8852	Wood Screw	Single Curtain	4.85
8853	Wood Screw	Double Curtain	7.90
8895	To Clinch	Single Curtain	4.95
8896	To Clinch	Double Curtain	8.00
8680	Machine Screw	Single Curtain	4.85
8681	Machine Screw	Double Curtain	7.70

Nelson Curtain Fasteners

Price Includes Eyelets.

Single.

No.	Finish	Per Gross
111A	Japanned	$6.10
111N	Nickel	$7.70

Double

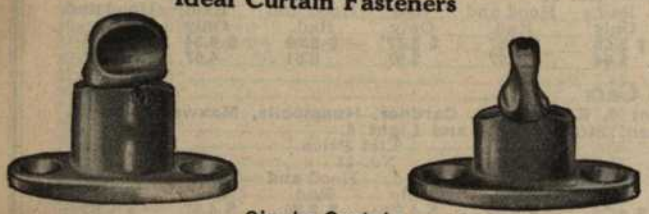
No.	Finish	Per Gross
121A	Japanned	$7.90
121N	Nickel	$9.90

Nelson Curtain Fastener Eyelets

Oval Eyelet and Back Plate.

No.	Finish.	Per Gross
123A	Japanned	$1.10
123B	Nickel.	$1.50

Ideal Curtain Fasteners



Single Curtain

No.	Finish	Per Gross
120A	Japanned.	$7.50
102N	Nickel.	$9.00

Double Curtain

No.	Finish	Per Gross
122A	Japanned.	$ 9.80
122N	Nickel.	$11.70

Triple Curtain

No.	Finish	Per Gross
115A	Japanned.	$16.50
115N	Nickel.	$18.40

Ideal Curtain Fastener Eyelets

Each Oval Eyelet includes Back Plate.

	Per Gross
No. 192J—Japanned finish	$1.70
No. 172N—Nickel finish	$2.00

Glass Windows for Ford

Attractive design, black enamel finish. No rattle, neat steel frames with clear vision glass. Will not cut the curtain. Each set consists of two steel frames, a glass and necessary screws for each window, three windows to a set—for old model cars—two windows to a set for 1923-24 model one-man tops. Each set packed complete in a box, weight per set, No. 312, 2 lbs.; No. 313, 1½ lbs.

No. 312—Set 3 for 1922 and previous.....Per set, $1.50

No. 313—Set 2 for 1923-1924.....Per set, $1.30

Celluloid

(PYRALIN) FLEXIBLE GLASS.

Sheets 20x50 inches. Heavy, suitable for automobile curtains. 100 sheets in a box.

No. 15.....Per sheet, $2.60

A slight additional charge will be made for each package of Celluloid of less than 6 sheets.

Small Car Pedal Pants

For Chevrolet, Durant 4, Gray, Overland and Star

Keeps out the cold and dirt. This durable rubber protector, placed under the floor mat, fits around the steering post and has sleeves that fit snugly around the pedals and levers to shut out the cold wind. The sleeves are flexible, permitting easy operation of the pedals. Can be installed in a minute. In two pieces as shown. Packed one complete in a box.

Fits Chevrolet, Durant 4, Gray, Overland and Star. Orders must state make of car for which they are wanted.

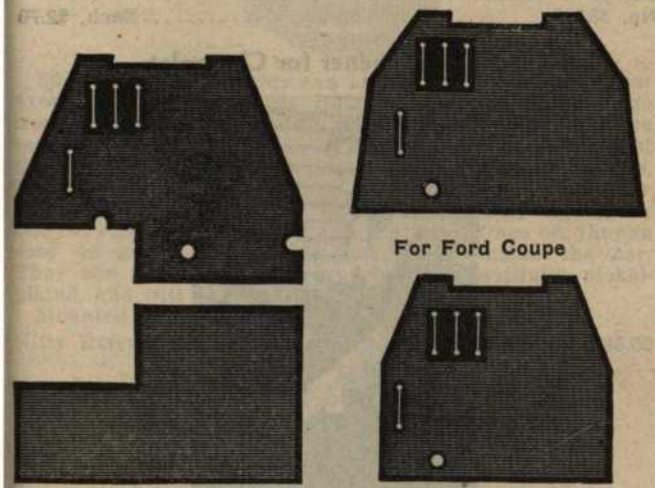
Small Car Pedal Pants.....Each, 1.50

Pedal Pants for Ford Cars

Keeps out the cold, heat, dust, dirt and water. When driving a Ford car in the summer the feet become uncomfortably warm from the hot air of the engine as it passes through the pedal and emergency brake openings. And in winter the feet get intensely cold from the cold air that comes up through these openings. Keep out the heat, cold and dust with Pedal Pants. A protector placed under the floor mat, with sleeves that fit snugly around the pedals and brake lever. Packed one in a box.

Pedal Pants.....Each, 1.25

Rub-Tex Mats for Ford Cars



For Ford Coupe

For Ford Sedan

For Ford Touring

The Rub-Tex Weather-Proof Mats fit tight around the pedals and brake. They keep out the cold air and slush in the winter, the hot air in the summer, and dust and mud.

Made with a very tough compound. This new rubber means greater durability and better wearing qualities. You do not need to be afraid of cracking a Rub-Tex Mat by bending it together.

Easily and quickly cleaned with a hose or broom, and instantly look like new. They are more sanitary and more durable than carpet and much lower in price.

For Ford Sedan

No. 500 —Years to 1922.....Per set, 5.00
No. 500A—Year 1923.....Per set, 5.00
No. 500B—4 Door Sedan, 1923.....Per set, 5.00
No 500C—4 Door Sedan, 1924.....Per set, 5.00
No. 504 —Tudor Sedan, 1924.....Per set, 5.00

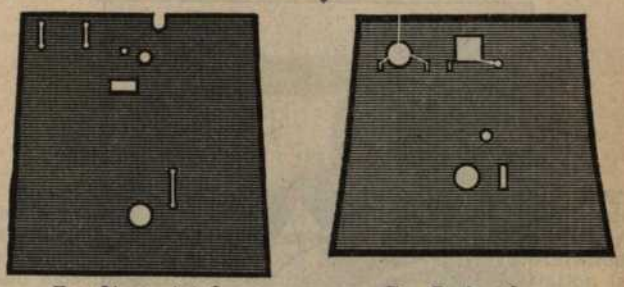
For Ford Coupe

No. 250 —Years to 1923, inclusive.....Each, 2.50
No. 250C—Year 1924.....Each, 2.50

For Ford Touring or Roadster

No. 145 —Front, Years 1920-1923.....Each, 1.45
No. 145A—Front, Years 1915-1919.....Each, 1.45
No. 145C—Front, Year 1924.....Each, 1.80
No. 160 —Rear Ford Touring, Years 1920-22....Each, 1.75
No. 160A—Rear Ford Touring, Years 1923-24....Each, 1.60

Rub-Tex Mats for Chevrolet and Dodge Cars



For Chevrolet Car

For Dodge Car

Made of same high grade material as for Ford cars. Durable and economical. Fits tightly around pedals, brakes, accelerator and speedometer cable, covering up the holes and cracks in the floor.

For Chevrolet Cars, Model 490—Year 1922

No. 335 —Chevrolet Coupe.....Each, 2.60
No. 340 —Chevrolet Sedan Front.....Each, 2.70
No. 320 —Chevrolet Sedan Rear.....Each, 2.60
No. 320A—Chevrolet Front Touring.....Each, 2.60
No. 300 —Chevrolet Rear Touring.....Each, 2.30
No. 325 —Chevrolet Roadster.....Each, 2.60

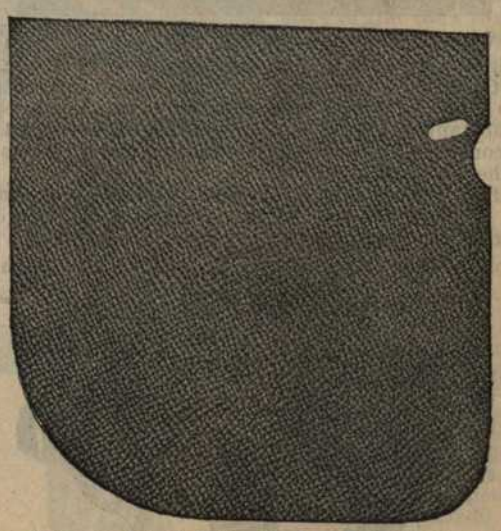
For Superior Model—Years 1923-24

No. 336—Chevrolet Mats, fits Coupe, Sedan Front, Roadster and Coach.....Each, 2.90
No. 321—Chevrolet Sedan Rear.....Each, 2.70
No. 301—Chevrolet Rear Touring.....Each, 2.40

For Dodge Cars

No. 380—Dodge Business Sedan Front, 1924; Business Coupe, 1924; Type "A" Sedan Front, 1924.....Each, 3.00
No. 381—Dodge Touring Front, 1924; Roadster, 1924.....Each, 3.00
No. 331 —Dodge Business Coupe, 1923.....Each, 2.75
No. 332 —Dodge Type "A" Sedan Front, 1923..Each, 2.75
No. 333 —Dodge Business Sedan Front, 1923...Each, 2.75
No. 330 —Dodge Touring Front, 1917-19.....Each, 3.00
No. 330A—Dodge Touring Front, 1920-23.....Each, 3.00
No. 330B—Dodge Roadster, 1917-23.....Each, 3.00
No. 376 —Dodge Rear Touring, 1922-23.....Each, 2.75
No. 375 —Dodge Coupe, 1919-21.....Each, 3.50
No. 375A—Dodge Coupe, 1922.....Each, 3.50

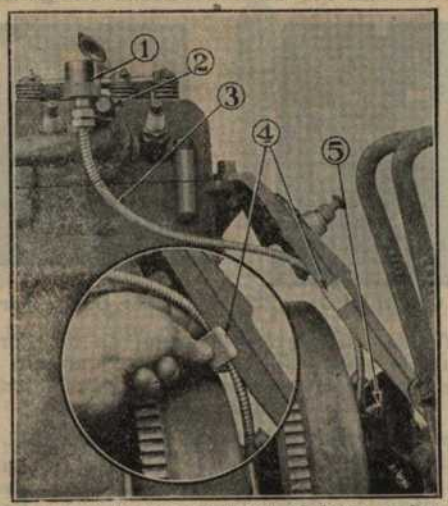
Fibre Door Panels to Fit Ford Doors



Made of heavy black fibre that is very strong. Looks like leather and does not show scratches or turn gray color. Gives better service than the panels with which the doors are regularly equipped. Cut in correct shape and size to fit various panels on Fords. Packed 10 in a carton.

No. 8083—Left front blind panel.....Each, .40
No. 8084—Right front dash panel.....Each, .15
No. 8085—Right front door panel.....Each, .30
No. 8086—Right rear door panel.....Each, .40
No. 8087—Left rear door panel.....Each, .40

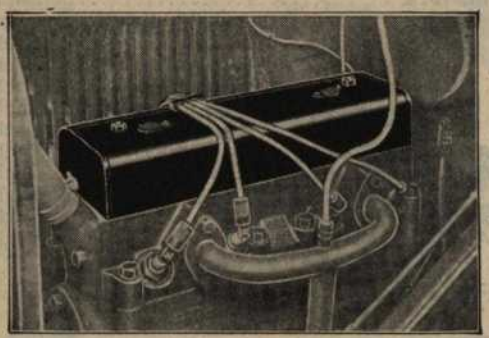
Marvel Clutch Collar Oiler for Chevrolet



This attachment fastens to front of dash, under the hood, and provides an easy way for oiling the clutch collar. The bronze clutch collar on a Chevrolet works perfectly when its reservoir is filled with oil, but if allowed to run dry there's trouble. It is a simple matter to get oil to the clutch collar with a MARVEL CLUTCH COLLAR OILER—just raise the hood and the oil cup is in a handy, convenient place. Large flexible tubing allows all grades of oil to flow freely. Fits all Models 490 and Superior Chevrolets. Packed one in a box.

No. 38337. . . . . **Each, $2.00**

Valve Cover for Chevrolet

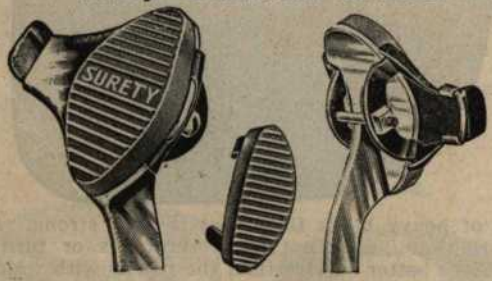


The Valve Cover is easily attached to a motor in about ten minutes. There are no alterations to be made. The Valve Cover is made uniform of auto body steel, finished in two coats of baked enamel, very neat in appearance and substantial. The felt covers the valves and gives them constant and perfect lubrication and protects them from the dirt and grit.

Reoiling the felt can be done without removing the cover, through the oil holes. Packed 6 to the carton. Weight 14 lbs. per carton.

Chevrolet Valve Cover. . . . . **Each, $2.00**

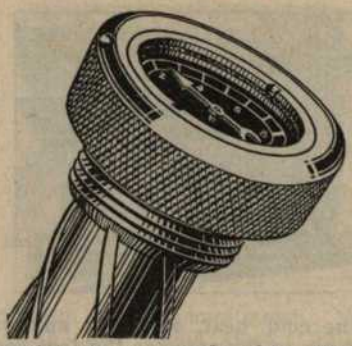
"Surety" Pedal Pads for Ford



"Surety" Extension Pedal Pads widen the regular Ford Pedals and give comfortable foothold. Made of nickel-plated steel and red rubber. Easiest to install; only one bolt to tighten. Set consists of two extension pedal pads and small pad for reverse. Packed one set in a carton.

Surety Pedal Pads. . . . . **Per set, $1.70**

Marvel Visible Gasoline Gauge for Chevrolet



Every Chevrolet owner needs this Marvel Gasoline Gauge for rear tank. A safe, sure, never-failing gauge that inserts in rear tank in place of regular filler cap. Accurately machined. Marvel Gauges are built for service. They are beautifully finished with polished, etched, aluminum dial and die-cast aluminum cap. Below the cap is a spiral rolled brass tube, inside of which a float moves with mechanical precision and operates an indicator hand on the glass-enclosed dial. Reads to gallons—accurate to fractions. After gauge is screwed down into tank. dial may be instantly adjusted—if necessary—so that figures on dial point in direction desired to be easily read. Packed one in a carton.

No. 38336. . . . . **Each, $2.70**

Pet Cock Opener for Chevrolet

A simple yet effective way to reach the oil pet cocks on Chevrolet cars. Appeals to user because he may quickly determine oil level, preventing a damaged engine due to insufficient lubrication. Packed 1 dozen to carton. Weight 4 lbs. per carton.

No. 36342. . . . . **Per doz., 6.00**

Regular Pedal Pads for Ford

The rubber in this pad is deep ribbed, which insures against the foot slipping and gives the driver that foot comfort and feeling of security so desirable. It is black rubber and of a quality that means long wear. 3 in a set.

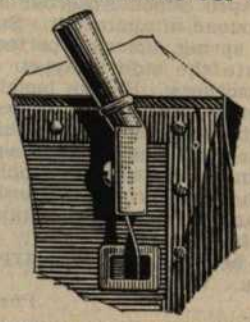
Regular Pedal Pads. . . . . **Per set, $0.50**

"HAN-D" Lever-Extension for Ford

The most rapid selling accessory made for the Ford car. "Han-D" Lever Extensions are wanted by every Ford owner. They add to the comfort of driving. Brings the Spark and Throttle Control closer to the Steering Wheel. Assures a firm finger grip. They are ornamental and easy to attach. Made of cast aluminum, polished and furnished to the dealer mounted 18 on a handsome display card, which sells them on sight.

"HAN-D" Lever Extension. .....Each, **$0.26**

"Nifty" Extension Handle for Ford Doors

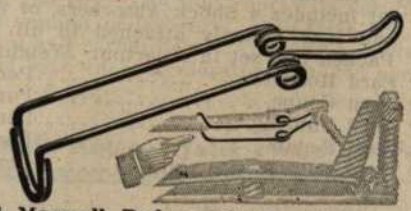


So simple that anybody can attach them—so handy that every Ford owner wants them. They end forever the trouble of reaching down into the car and fumbling with the regular Ford door handle. They add to the "finish" of the car itself. Nifty Handles are as their name implies, Extension Handles—they slip right on over the regular Ford door handle and are firmly attached by tightening one set screw with a pocket screw driver. Once on, they're easy to grasp from either outside or inside the car. They are made in one solid casting, beautifully nickel-plated, and will not rust.

Mounted 18 on handsome counter display card.

Nifty Extension Handles.....Per doz., **$6.00**

Fernald Steer-Aids

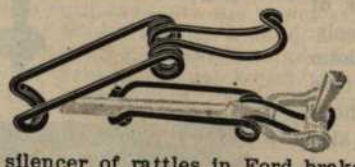


For Ford, Maxwell, Dodge and other light cars.

A simple device for overcoming all steering rod rattle and racket—wheel wobble vanishes—wheels keep in alignment—skidding dangers decrease—wear on front tires is cut down. Attached in an instant without tools. Finished in baked enamel. Packed 1 doz. pairs in a display box.

Fernald Steer-Aids.....Per doz. pairs, **$5.00**

Fernald Little Brats



A positive silencer of rattles in Ford brake rods; takes up wear and adds to safety of construction.

Two Brats are used on each brake rod. At rear of rod the loop end slips over hub brake expander lever and other end around the rod. At front loop slips over brake shift lever, other ends around rod.

Made of high-grade tempered spring wire. Intended for Fords, but will fit majority of other makes also. Finished in baked enamel. Four in a set. Packed 1 doz. sets in display box.

Fernald Little Brats.....Per doz. sets, **$5.20**

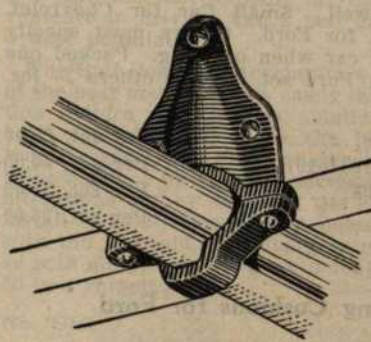
Apco Steering Column Brace for Ford

The Apco Steering Column Brace we know fills a long-felt want, as it gives the Ford steering column that rigidity found on the more expensive cars, which insures safety by preventing those troubles such as excessive vibration and loosening of the steering column. The installation is very simple and necessitates the drilling of but two holes in the dash, and the balance of the job can be done with an ordinary wrench and a screw driver. The regular finish is black enamel, and the special finish is highly polished, the latter being primarily designed for closed cars.

No. 42 —Black. . . ..Each, **$1.10**

No. 42½—Polished. . . ..Each, **$1.50**

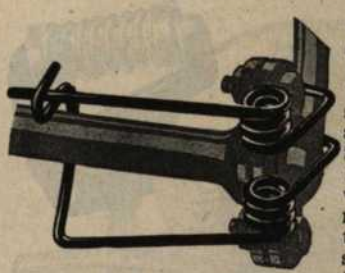
Cooper Steering Column Support for Ford



Holds steering column absolutely rigid. Takes all vibration from steering wheel. Adds greatly to comfort in driving, especially over rough roads and in climbing hills. A light, strong casting, neatly finished in black enamel. Fits all Fords having instrument board, both open and closed models.

No. 8763....Each, **$1.00**

Fernald Sasar for Ford



A simple, sure-action device for making Fords steer easier and taking road jolts off the steering wheel. Stops rattles, saves wear on bushings and adds to the car's life. The Sasar is put on at the steering arm connection, with loop saddling the connecting rod. Made of oil-tempered, heat-treated steel wire with baked japan finish.

Packed in distinctive counter-display cartons, each containing 18 Sasars.

Fernald Sasar. . . ..Doz., **$6.00**

Apco Anti-Rattlers

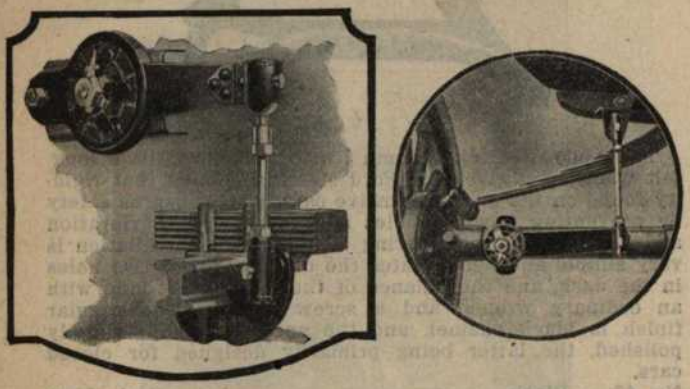
Practically every car on the market has adjustable caps on the steering arms and radius rod so that the wear on these parts is automatically taken up. The Ford car is not equipped with these devices, however, and the Apco Anti-Rattlers are made to do for the Ford car what the manufacturers do for the big cars.

The Apco Anti-Rattlers are not only easily adjustable, but they are fitted with heavy springs which automatically take up the wear as it occurs, which is especially important with the steering gear.

No. 21—For Radius Rod.....Each, **$0.46**

No. 51—For Steering Rod. .....Pair, **$0.46**

Hartford Shock Absorbers



Improve the riding qualities of any car by controlling and softening the spring action, regardless of load, speed or road conditions. No springs, straps or bushings to wear or need adjustment. Simply clamp on fittings. Works on the friction block principle which is very effective. Furnished in four different sets. **Large Car** for Cadillac, Lincoln, Rolls-Royce. **Average Car** for Buick, Dodge, Hupmobile, Maxwell. **Small Car** for Chevrolet, Overland, Gray. Special for Ford. Orders must specify make, model and year of car when ordering. Packed one set in a carton. Weight Ford set, 25 lbs; others 35 lbs. per set.

Large Car Set, Model 108.....Per set, 50.00
Average Car Set, Model 104B-107.....Per set, 40.00
Small Car Set, Model 106.....Per set, 30.00
Ford Set, Special.....Per set, 25.00

Halladay Spring Cushions for Ford

Rear Unit

Front Unit

Halladay Spring Cushions are of simple and sturdy construction, and there are no light parts to break or lose. There is no binding of moving parts. All bearings are bushed and provided with handy means of lubrication. Resilient springs that in effect really lengthen the car spring at each end produce wonderful flexibility and reduce to the minimum the effect of the shocks and jolts to which the car is constantly subjected. The construction of the Spring Cushion permits the use of a sensitive spring which forms a soft cushion between the axle connection and the lever, from which the regular car spring is directly suspended. The greatly increased comfort of driver and passengers, as well as added safety in steering, through the action of Halladay Spring Cushions, is immediately noticeable and permanent, as they maintain their efficiency regardless of dirt or wear.

Built in three weights—for roadster, touring or coupe and sedan. The sedan type is suitable for light commercial truck. When ordering be sure to specify type of car.

Packed one set in a carton. Weight 18 lbs. per set.

Halladay Spring Cushions.....Per set 4. 14.00

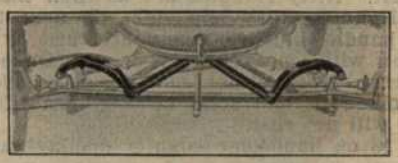
Apco Shock Absorbers for Ford

There are a number of shock absorbers for Ford cars on the market, but the Apco is the only direct suspension shock absorber on the market with conical or beehive springs, and the Apco Shock Absorber spring works with the Ford spring instead of against it. Sets at right angles to the Ford front spring, insuring perfect action, and the side links eliminate the side sway so common to other types of shock absorbers. Bronze bushings, nut and bolt adjustment, convenient spring cap oilers, and high grade drop forgings, with the best workmanship. The spring is high grade, heat treated steel, ground square on each end and made of half-inch wire with four-inch coils, the largest ever used on a shock absorber for Fords. Assembled all ready to install, and the installation takes less time than any other shock absorber built.

When ordering be sure to specify type of car. Packed one set in a carton. Weight, 35 lbs.

No. 200. .....Per set of four, 25.00

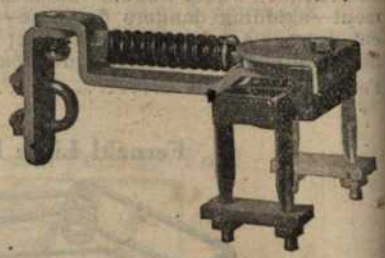
H & D Shock Absorbers for Ford



These shock absorbers will greatly improve the riding qualities of a Ford. Made with twin arms. Easy to install. Made with different strength springs for various models. A set includes 4 Shock Absorbers, or enough for both front and rear. Easily attached to all models of Ford cars. Packed one set in a carton. Weight, 18 lbs.

No. 1—For Ford Roadster. . . ..Per set, $8.00
No. 2—For Ford Coupe. . . ..Per set, $8.00
No. 3—For Ford Touring. . . ..Per set, $8.00
No. 4—For Ford Sedan. . . ..Per set, $8.00
No. 5—For Ford Commercial Car. . .....Per set, $8.00

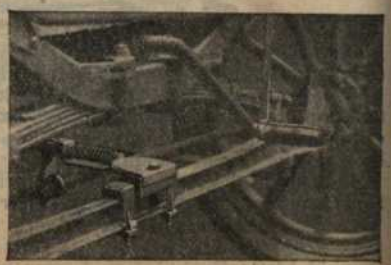
Balcrank Stabilizer for Ford



Attached to the front axle and tie rod. A heavy coil spring absorbs the jars and jolts of the front wheels. This causes them to run in a true course without wobbling. It also makes a Ford safer to drive.

Packed 1 in a carton, 12 in a case.

Balcrank Stabilizer. Each, $2.00

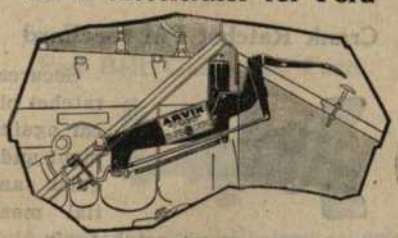


Williams Jr. Accelerator for Ford

The Williams "Junior" Accelerator is designed to meet the demand for a moderately priced Ford foot throttle, embodying sound mechanical principles. It is easily installed, simple in operation, sturdily constructed, and has no complicated parts. Installation is accomplished by disconnecting the regular Ford pull rod at the hand throttle, and clamping the Williams "Junior" Accelerator in place. An accurate adjustment is made through the medium of one screw, held in place by a lock washer. Action on the carburetor is obtained through a spring steel control wire and the regular Ford pull rod. The Accelerator does not interfere with the operation of the hand throttle. The Williams "Junior" Accelerator is made of steel parts, nicely finished; and is packed one in an attractive carton. Shipping cases contain 12 and 36 Accelerators.

No. 36937.....Each, 1.50

Arvin Accelerator for Ford



Any car owner can quickly install the Arvin Accelerator. Does not interfere with removal of the toe boards or floor covering of the car. The foot control is designed to give the proper amount of leverage. One style fits all models of Ford cars and carburetors. A sturdy pedestal foot rest is furnished with each accelerator. Packed one to carton.

No. 17583.....Each, 1.75

Uneeda Rotary Water Pump for Ford

A powerful, heavy duty, large capacity water pump, so constructed that it handles from five to ten times the amount of water with one-tenth the power as other designs of water pumps. Has a special treated, semi-steel barrel, closely machined, with a patented rotary turbine, pressed on a cold rolled steel shaft and keyed (so designed that even if fan belt should break, you still have the same Thermo-Syphon Circulating Water System which is now on the Ford car), operating between two special, extra long phosphor bronze bearings, self-lubricating, needs no oiling, with extra large brass stuffing box nut with eight inches of asbestos woven, graphite packing, which makes it practically indestructible and foolproof Driven by regular Ford fan belt, over 2-inch flange pulley, one model for all models of Ford cars and trucks, neat and attractive, can be attached with wrench and screw driver in 15 minutes.

Packed one in a carton. Weight 7½ lbs. Directions how to install and operate on each carton.

No. 71186.....Each, 8.50

Bull Dog Accelerator for Ford

The Bull Dog Accelerators give drivers of Ford cars and trucks the same simple, easy, yet positive, foot control of the carburetor, found on higher priced automobiles. Recent improvements include the rubber covered pedal, that prevents the foot slipping off the foot rest, a great convenience in driving, and a mat binder that helps to make a neat installation.

The Bull Dog Foot Accelerators are carefully constructed of the best materials, are easily installed and after installation require no attention. Action is independent of the hand control. The speed can be held uniform even on rough roads. The floor boards can be removed without inconvenience by simply unscrewing the pedal button. No alterations on any model of the Ford car are necessary to install the Bull Dog Foot Accelerator and it can be used with the Rayfield, Stromberg or other carburetors as well as with all regular Ford equipment. Packed one in a carton. 50 in a shipping case.

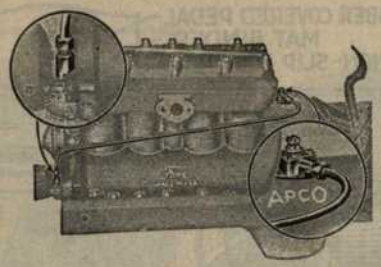
No. 1752.....Each, 1.50

The Flood Water Circulating Pump for Ford

Keeps a Ford motor at full-power, full-economy temperature always. No holes to drill. No "extras" required. No interfering with the accessibility to any part of the motor. No clamps to work loose and cause trouble. Compact—built into a single unit—"Flood" is easily and quickly attached by simply removing the metal arm which leads to the upper hose connection on the radiator. Fits any year model Ford since 1916. Packed and furnished with an oak-leather belt, specially treated to resist oil. Powerful, "light-running" suction propeller. Thermo-Siphon circulation is not interfered with in case pump belt should minute at car speed of 20 miles an hour. Packed one in a carton.

No. 37963.....Each, 5.00

Apco Oiling System for Ford

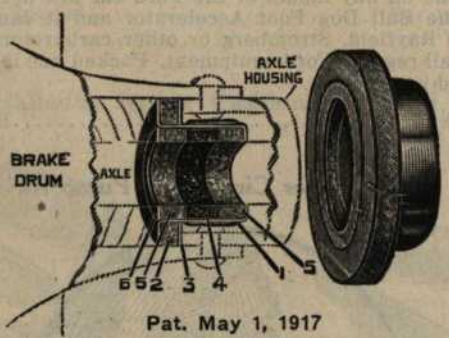


The Ford motor depends for its oil circulation on a gravity feed which runs from the top of the transmission case over the fly wheel down to the front of the motor through a small tube inside the cylinder block, and at times this pipe becomes clogged with small pieces of brake lining. When this occurs the circulation system is absolutely put out of commission, often resulting in burnt-out bearings.

The Apco Oiling System provides an auxiliary pipe outside of the motor so that if the regular pipe becomes clogged the motor is still liberally supplied with oil. A special magneto plug takes the place of the regular magneto plug, and a pipe attached to this fixture carries the oil to the breather pipe, which is also a special design, and the installation can be done in less than fifteen minutes with no other tools than a screw driver. Packed one in a carton.

No. 60. . . . . Each, $3.00

Inland Grease Retainers for Ford



Pat. May 1, 1917

1. Steel Cup. 2. Large Felt Washer. 3. Large Steel Retaining Ring. 4. Asbestos Washer. 5. Small Felt Washers. 6. Small Steel Retaining Ring.

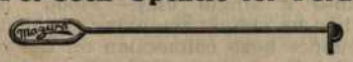
The Inland Grease Retainer consists of 3 extra high-grade felt washers and one rubber asbestos washer, a cold drawn steel cup and 2 retaining rings, and when assembled and used as shown in cut, it is absolutely the best device of its kind on the market to prevent grease from working out through the axle.

The Inland Grease Retainer remains stationary, the two rivets in present axle housing keeping it from turning and it does not cause wear on the axle. The method of installing is very simple. Directions with each retainer. One complete Inland Grease Retainer is packed in cardboard box, making a neat display on the shelf. Packed one in a carton.

To assist dealers in making sales, a counter display stand is furnished free with each dozen.

No. 9065. . . . . Each, $1.10

Pet-Cock Openers for Ford



Affords an easy method of opening oil-cocks without soiling hands or gloves, or injury to clothing from oil, dirt, etc. Can be used for opening the pet-cock of any car. Also handy for measuring amount of gasoline in tank. Length, 22 inches. Made of cold-rolled steel.

No. 148. . . . . Per doz., $2.00

Apco Dash Oil Gauge for Ford or Chevrolet

The Apco Dash Oil Gauge is attached to the instrument board and by simply glancing at it the driver knows just what the oil level is at all times. The hollow wire from the Apco Oil Gauge leads to an air pressure chamber threaded into the crank case in the place of the lower pet-cock, and the oil rising in this chamber acts upon the liquid in the gauge just the same as a piston. No oil of any kind goes through the hollow wire which is used for an air passage. The body gauge is an aluminum die casting. This device should in a very short time save its cost in the amount of oil used. Packed one in a carton.

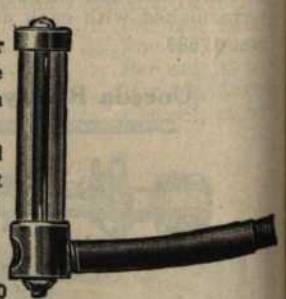
No. 40 —For Fords. . . . . Each, $3.80
No. 40½—For Chevrolets. . . . . Each, $3.80

Crank Ratchet Pin for Ford

Secures the crank ratchet pin on a Ford car against displacement and provides a quick and substantial means of replacing a lost or worn crank ratchet pin.

No. 50. . . . . Each, $0.24

Oil Gauge for Ford



Takes the place of the lower pet-cock on the transmission case and shows at a glance how much oil there is in the car.

Has extra large heavy improved Scotch gauge glass, and air vent at top.

Packed one in a carton.

No. 278. . . . . Each, $0.50

Oil Gauge for Ford

Made entirely of cast brass. The protecting shield is of great advantage as it protects the glass from being broken by stones that might fly up against it. The glass furnished in this gauge is of extra heavy quality, very fine and transparent.

Packed one in a carton.

No. 44. . . . . Each, $1.00

Akuret Oil Gauge for Ford

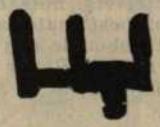
The Akuret Oil Gauge is a simple, convenient and absolutely accurate, all metal device for indicating the quantity of oil in a Ford motor. This gauge consists of an elbow, a tube, and a measuring rod, permanently attached to the Ford motor. The elbow replaces the lower pet-cock; the tube screws into the elbow and projects about one-half inch through the splash pan, coming out nine inches above the right hand running board. The measuring rod is inserted in the tube.

The lower end of the rod is marked DANGER—LOW—O. K.—EXCESS. The top O. K. mark indicates the upper pet-cock level; the lower O. K. mark represents the oil level when half way between the two pet-cocks. The extreme end of the rod shows the lower pet-cock level of oil. This is the Danger Area.

To ascertain the amount of oil in the motor, simply pull out the measuring rod, on which the oil registers clearly and accurately. It tells at a glance, without even bending over, the exact amount of oil supply in relation to the two pet-cocks. Packed one in a carton.

No. 3503.....Each, **$2.40**

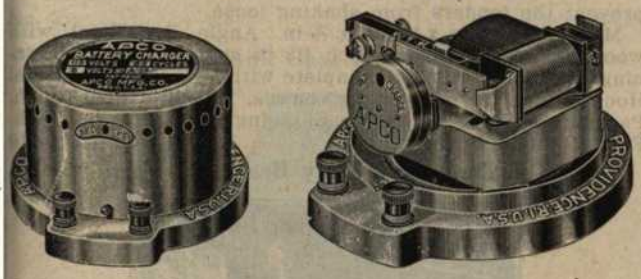
Fan Belt Guide for Ford



Designed to keep the fan belt from slipping off and should be used on every Ford car. The fan belt can slip off and the driver not know it, causing very serious trouble to the motor. Packed one in a carton.

No. 3250.....Each, **$0.30**

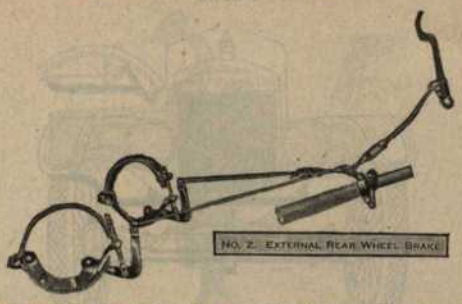
Apco Rectifier or Battery Charger



A brand new vibrating type Rectifier that is without the troubles ordinarily associated with this type. Practically noiseless, improved charging indicator, six ampere capacity, 70 per cent efficient, 60 watt consumption, operates on 10 per cent variation of cycles, automatic kick-off to eliminate points sticking, taper charging rate, B battery attachment, low cost of replacements, self-polarizing and an unusual guarantee are some of the big features. Complete with wire, plug, battery clips, etc. A silent battery charger that fully charges a radio battery over night and a fully charged battery means a successful radio set. Packed one in a carton.

No. 77.....Each, **$25.00**

External Rear Wheel Brakes for Ford



Delivers the breaking power direct to the rear wheels. Removes strain from the rear axle shaft gears, keys and transmission bearings. Greatly lengthens the life of car. Does not interfere with regular equipment or shock absorbers. The best brake lining is used. No holes to drill. Easy to install. These brakes are guaranteed to make all stops free from chatter and grinding; also guaranteed against all imperfections. Packed one set in a carton.

No. 2—For Ford Passenger Cars.....Per set, **$25.20**

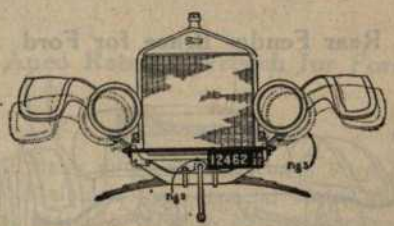
No. 3—For Ford 1-Ton Truck.....Per set, **$39.00**

Apco Rear Wheel Brakes for Ford

There is a greater need for a real Rear Wheel Brake on the Ford car than almost any other piece of equipment. In addition to the extra safety this gives, there is the elimination of that destructive chatter which shortens the life of the Ford. Among the many Apco features are the elimination of cable, the use of bronze bushings, drop forgings, asbestos lining, equalizers, double adjustments, etc. Will outlast the car to which they are applied and without rattles or drag. Packed one set in a carton.

No. 11—For Ford Passenger Cars.....Per set, **$10.80**

Neckties for Ford

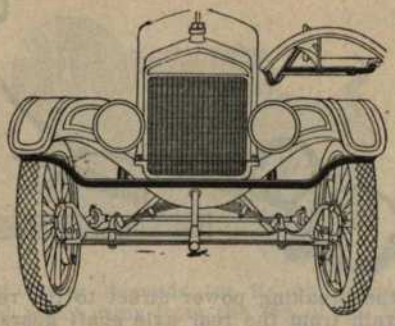


Both a tool and a truss. You hook the Necktie on and then tighten the nuts until you bend the cross-member back into place and then hold it there, removing all strain from the radiator. Prevents the breaking of the cross-member, saves repair bills, prevents the steering gear from flopping and throwing you in the ditch, stops the front fenders rattling. Can be put on in a minute. Constant pounding on the Ford cross-member causes it to sag or break. When the cross-member sags, the radiator must hold the side rails together, thus the weight of the car is pulling across the radiator, causing the ears of the radiator to break off or cause the radiator to split and leak.

Packed 12 in a box.

No. 25150.....Each, **$1.90**

Brocksmith Combination Fender Braces for Ford
Front



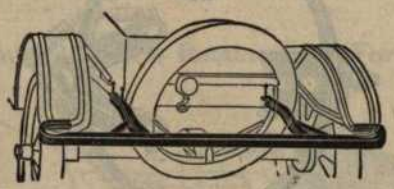
It will hold the fenders in perfect alignment and when called upon to act in the capacity of a bumper will protect the most valuable part of the car, which is the radiator, lights and engine.

Also when installed does not project out any further than the fenders, eliminating all vibration of the end of the fender, and which in turn prevents the running board from vibrating and rattling, making it appear as part of original equipment. Can be installed in twenty minutes.

Material 1¼x1¼x⅜ Tee Steel.

Packed 4 to the bundle. Shipping weight 16 lbs. each.
No. 36368—Front.....Each, $6.00

Brocksmith Combination Fender Braces for Ford
Rear



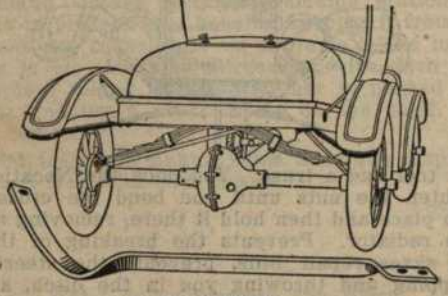
The Brocksmith No. 9 Model gives to the Ford that mark of distinction that only a Bumper can give. The Brocksmith goes further—it braces the fender. It will prevent the breaking or bending of the rear fenders. It also protects the rear of the car from damage done by backing up or in a traffic jam, and most of all, it protects you from the other fellow. Can be installed in twenty minutes. Packed 4 to the bundle. Weight 18 lbs. each.
Material 1¼x1¼x⅜ Tee Steel.

Order must specify year and model of car.

No. 36369—For rear Ford Touring, Roadster and Coupe, 1924 and previous.....Each, $6.70

No. 36370—For rear of Ford Fordor and Tudor Sedans, 1924 models.....Each, $8.00

Rear Fender Brace for Ford



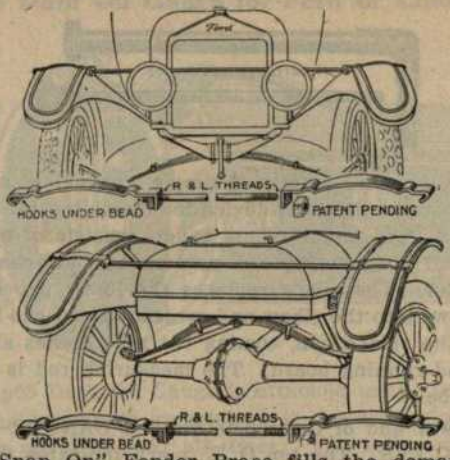
PATENT PENDING

The severe vibration of the Ford car causes fenders to crack and break. This Fender Brace reinforces the fender, eliminates all vibration and rattling and makes it more durable. Quickly and easily attached to all models of Ford cars. The two stove bolts and two lag screws necessary for installation are furnished with braces.

Packed 12 pair in a bundle. Weight 24 lbs. per bundle.

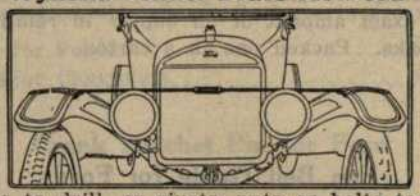
Rear Fender Brace for Ford.....Per doz. pair, $9.60

"Snap On" Fender Brace for Ford



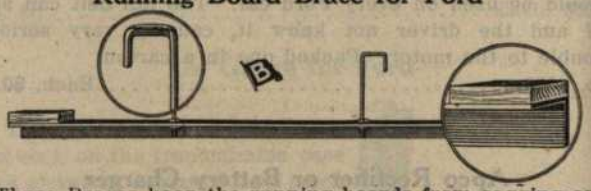
The "Snap On" Fender Brace fills the demand for a brace that is both low in price and easy to install. Hook it over the fender, turn the tie rod with a pair of pliers, and the clips are drawn up like a vise. No holes to drill or bolts to bother with. Put up 12 in a bundle. Weight 27 pounds per dozen.
No. 36327—Front.....Per doz., $10.80
No. 36328—Rear.....Per doz., $10.80

Wynona Fender Brace for Ford



No holes to drill, or rivets, nuts or bolts to fasten or become loose. Made of best material. Attractive in appearance. Adjustable turnbuckle can be tightened to hold the fenders firm at all times. Black japan finish. One in a package. Weight 2 lbs. each.
No. 3939—Front.....Per doz., $16.80
No. 3940—Rear.....Per doz., $16.80

Running Board Brace for Ford



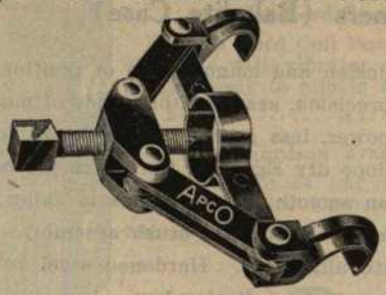
These Braces keep the running boards from sagging and prevent the fenders from shaking loose.

Made of 1½-in. x 1½-in. x ⅛-in. Angle Bar Steel with wood blocks attached, which fit in space under the running boards. Furnished complete with ⅜-inch Round Steel Hooks which fasten over the chassis. Black enamel finish. Packed 6 braces to bundle. Shipping weight 11 lbs. each.
Ford Running Board Braces.....Each, $2.10

E Z Door and Body Brace for Ford

A practical appliance perfected by a practical engineer. Supports the weak side of the car and insures perfect alignment of door and body. It braces the car where support is needed most. Fitting directly under the dash to the right-hand side, the brace supports the windshield. Weight 1¾ lbs. each.
E Z Door and Body Brace.....Per doz., $24.00

Apco Rear Wheel Puller for Ford

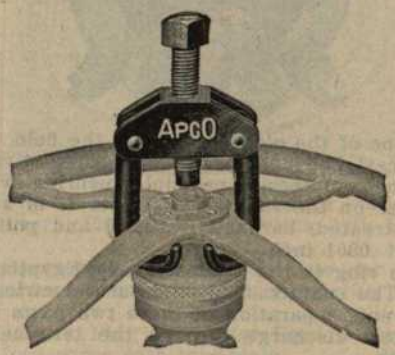


It is very often necessary to remove the Ford rear wheel, and while there are very many wheel pullers on the market, there are none that will remove the wheel quickly without danger of stripping the thread on the hub, as other wheel pullers thread on a very fine thread thread on the outside of the hub itself.

The Apco Rear Wheel Puller will do the job quickly and without touching the threads, as the hooks slip over the spokes and the large screw tightened up with a wrench and struck with a hammer removes the most obstinate wheel quickly. It is made from drop forged steel, malleable iron and steel stampings. The screw is tool steel heat treated and will stand up under the most severe service. Packed 1 in a carton. Weight 6 lbs.

No. 7 ..... Each, $4.50

Apco Steering Wheel Puller



It is almost impossible to remove the steering wheel on a Ford or any other car without damaging it, unless a special tool is used. The Apco No. 2 Steering Wheel Puller will meet with the approval of everyone who at any time has had to remove any steering wheel. It is made from drop-forged steel and malleable iron, and the screw is made from tool steel, heat treated, to withstand hard usage. Packed 1 in a box. Weight 4 lbs.

No. 2 ..... Each, $4.50

Apco Crank Case Arm for Ford

Breakage of the Crank Case Arm on a Ford car is not an unusual occurrence, and when this does happen it necessitates the removal of the entire engine for repairs and the laying up of the car for at least a day. The Apco Crank Case Arm makes this repair possible in less than an hour with ordinary tools and the cost is negligible, as it is simply a steel stamping which fastens to the crank case with the bolts that are already on the car. Weight 2 lbs.

No. 30 ..... Each, $0.95

Apco Perch Pusher for Ford

The front spring perches on the Ford car often rust in so that it is necessary in a good many cases to remove the entire axle and even drill the perch out of the axle. This tool simply hooks around the axle, the screw is tightened with a large wrench and then a sharp blow with a hammer does the job. Made from malleable iron steel stamping, and the screw is tool steel heat treated so that it will last indefinitely. Packed 1 in a carton. Weight 5 lbs.

No. 8 ..... Each, $4.50

Mossberg Wheel Puller

This puller has a free thrust bolt that enables the operator to tap the bolt head with a hammer in particularly difficult cases, with no injury to either hub threads or puller threads.

Fits Ford and Chevrolet "490" hubs. Made of heavy drawn steel with adjustable grip clamp strap for assured safety to threads. Burnished nickel finish. Packed 1 in a carton. Weight 1¾ lbs.

No. 660 ..... Each, $2.20

Apco Ratchet Wrench for Ford

There are many nuts and bolts on a Ford car that are almost inaccessible without special tools, and while the No. 14 Apco Ratchet Wrench was primarily designed to reach the fourth connecting rod of the Ford car, it will fit on all $\frac{7}{16}$-inch bolts of which there are a number on the Ford, including cylinder head bolts, water connection, demountable rims, etc., and it will save a lot of time wherever it is used. This Wrench has the finest adjustment of any Wrench on the market, made possible by the use of three pawls instead of one, which gives a hundred and forty-four gripping positions instead of forty-eight—absolutely eliminating all lost motion. This tool is made of high grade tool steel throughout, highly polished, and is one of the best made articles in the Apco line. Packed 1 in a carton. Weight 1 lb.

No. 14 ..... Each, $4.50

Milwaukee Timers (Bakelite Case)

Nineteen years' experience in the design and manufacture of ignition devices has made Milwaukee an instrument of real precision, assuring thousands of miles of perfect ignition service, easier starting, more power, less carbon. Each instrument is rigidly tested, mechanically and electrically. Bone dry Egyptian fibre race pressed to a tight fit in the Bakelite case. Remains satin smooth for thousands of miles. Fine steel contact points with welded stems. Famous Milwaukee brush assembly. Two bronze castings, fitted and gauged for accurate alignment. Hardened steel roller, finished like a ball bearing. Packed 1 in a carton, 10 in a display box.

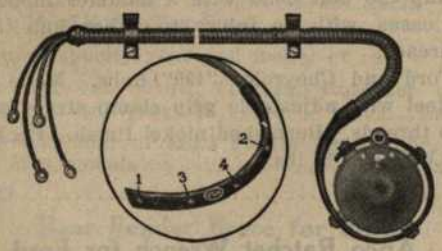
No. FT18 . . . . . Each, 2.00
No. FT19—Brush Assembly only . . . . . Each, .70

Delta Timers

This Timer is practically a duplicate of the Ford Motor Company's Timer. The shell or case in design is exactly the same size and shape as the Ford Timers; the oiler is standard spring-cap style—full size and fastened so that it cannot come out. The fibre is white and bone-hard—machined to a glass smoothness. Nuts are coppered and terminal screws are protected by good white fibre washers of ample size to avoid the possibility of short circuiting. Case is made of bright finish steel. Packed 1 in a carton.

Delta Timers . . . . . Each, $1.20

"Popular" Timer Wire Assembly for Ford Cars

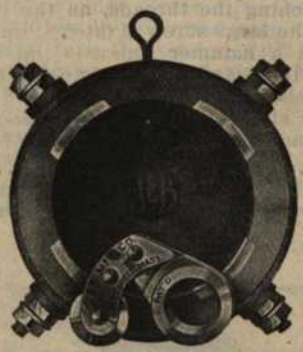


Fits any make of Ford timer of standard shape. Will outlast five or more ordinary Loom Timer Wire Assemblies. Made of a flexible oil-and-water-proof metal hose, encasing the four New Code insulated wires (250-Volt Underwriters' Laboratories Inspected) and having the usual spark-coil terminals at one end. At the timer end the cords are enclosed in a fabric sleeve, the wires being permanently connected at the factory to eyelet-terminals spaced to fit the timer terminal studs. The fabric is treated and sealed by a special chemical process, making it absolutely impervious to the action of oil, water or dirt, yet leaving it perfectly flexible. The only remedy for Timer Wire Assembly troubles is to use only an assembly constructed to overcome the causes of failure in ordinary assemblies. Guaranteed for five years and in the event of a break-down due to oil or water, in that period, a new Assembly will be given free of charge. When a new Timer is installed it takes only a few seconds to change the connections and the Popular Timer Wire Assembly can be used over and over again.

Each Popular Assembly is packed in an attractive two-color carton with complete directions for installing.

No. 200 . . . . . Each, $2.00

J. & B. Timers



This is one of the oldest timers in the field. The Rotor has a die cast hub and a spring of piano wire which operates on the compression principle, insuring even pressure of the roller on the race. The Roller is of special alloy steel, heat-treated, hardened, ground and polished to an accuracy of .0001 inch.

The fibre ring is the highest grade Egyptian stock obtainable. The contacts and studs are electrically welded which prevents separation of these two parts and insures full electrical discharge through the terminals. Packed 1 in a carton.

J & BT1 Standard Timer . . . . . Each, $2.20
J & B Standard Housing only . . . . . Each, $1.65
J & B Rotor only . . . . . Each, $0.80

J. & B. Heavy Duty Timers

For Fordson

This is considered the highest grade and most rugged instrument on the market. It is particularly adapted to heavy service such as is found on Ford Trucks and Fordson Tractors. It is also used extensively on Ford cars.

The Rotor is patented and built to insure even pressure on the race. The Roller is of special formula steel heat-treated, hardened, ground and polished. A spring operating on the compression principle and of special tension is used.

The housing or Shell is of very heavy material, and is ground to fit the Timer Receptacle on Tractors, Trucks and Ford cars. Extra hard Egyptian Fibre is used. The contacts are of extreme thickness and are electrically welded to the stud. They will outwear the car. These Timers are fully guaranteed. Packed 1 in a carton.

J & B Heavy Duty Timer . . . . . Each, $3.00

Coil Units

For Ford Cars

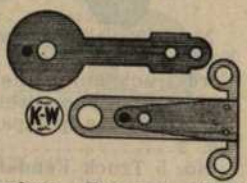
Used in Ford Coil Box. Supplied complete with vibrator springs and points ready to slip in coil box.

No. 34.....Each, $2.30

For Fordson Tractors

Same as No. 34, but is made particularly to fire Kerosene Fuel.

No. 35.....Each, $4.00



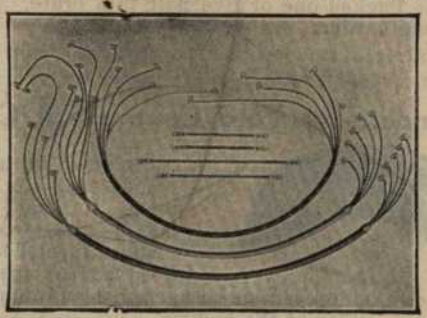
Vibrator Points

For Ford and Fordson

Replaces Ford repair numbers 5008 and 5009. Put up one pair in an envelope.

No. 1—Genuine K-W, for Ford or Fordson..Per pair, $0.24
No. 89005—Points for Ford.....Per pair, $0.26

Ignition Harness for Ford and Fordson



No. 5030—Five-wire Commutator Sets for Fords without starter. Consist of five wires with braided cover.....Each, $0.60
No. 5031—Seven-wire Commutator Sets for Fords with starter. Consist of seven wires with braided cover.....Each, $1.10
No. 50279—Spark Plug Wires for Ford. Consist of set of four wires with terminals.....Per set, $0.34
No. 715—Four-wire Commutator Sets for Fordson. Consist of four wires with braided cover...Each, $0.48
No. 808—Spark Plug Wires for Fordson. Consist of set of four wires with terminals.....Per set, $0.48

Apco Horn Button for Ford

The Apco Horn Button is a simple device which takes the place of the nut in the center of the Ford steering wheel and it gives to the Ford what most of the other cars already have when they leave the factory. Packed 10 in a display carton.

No. 138.....Each, $0.70

Keys for Ford Cars on Display Board

The above Display Board contains 6 keys of each of the 24 different numbers, 144 keys in all. The Display Board sells the keys and tells the condition of your stock at all times. Display Board furnished free with each assortment.

No. 1444 Assortment.....Each, $17.30
Extra Keys (furnished in lots of 20 or more).Each, $ 0.12

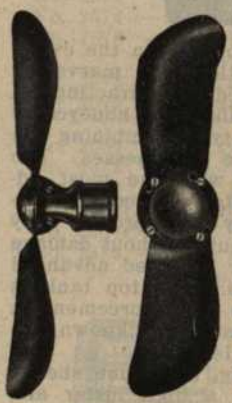
Horn Button for Ford

The larger wheels which are being installed on a great many Ford cars necessitate an extension of the gas lever so that it can be reached handily, and the Apco Horn Button not only fulfills this purpose but it puts the horn button directly under the driver's fingers where it can be reached at all times.

It consists of a stamped steel bracket with a button inserted in the end and wires leading to the present horn button.

This device can be installed in a very few minutes with ordinary tools. Packed 10 in a display carton.

No. 9.....Each, $1.15



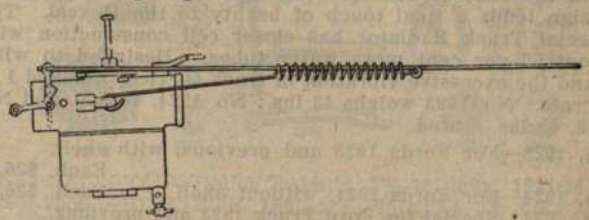
Juelson Two-Bladed Fan

For Ford Cars and Fordson Tractors.

Will actually keep motor cool under all conditions. It will throw many more times the intensity of air currents than is thrown by the ordinary fan, and will deliver these air currents just where wanted. A great, swiftly moving wall of cool air surrounding and bathing entire engine—and all of this requiring a good deal less power than is needed for the old style four or six bladed fan. Packed 6 in a carton.

For Ford.....Each, $2.25
For Fordson.....Each, $4.20

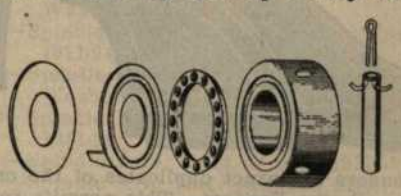
Spring Choker Wire for Ford



Combination Priming Rod and Carburetor Spring. No matter which is needed—the rod or the spring or both—you sell the same article. For starter or old model cars. When the dash choker is pulled, the spring opens the valve as when choked from the crank. Ring is bent after inserting through radiator. Installed in less than two minutes.

No. 36323.....Per doz., $3.60

Crankshaft End Play Takeup Pulley for Ford



Makes starting easy—it takes the end play out of the crankshaft, spaces the magnets the proper distance from the field coils, making more efficient ignition. Makes motor run smooth at all speeds, thereby reducing lost motion and wear, cutting down the cost of upkeep. Improves lights 50 per cent at normal speed. Will last practically the life of the car. Packed 1 in a carton.

No. 47292.....Each, $3.50

Hexcel Radiator for Fords

Hexcel Radiators are a long step forward in the evolution of radiator design and construction. Its marvelous capacity for performance was attained by extracting all the strong points in favor of the cellular or honeycomb type of construction and the tubular type, combining the two and eliminating their respective weaknesses The finest material obtainable, together with the most advanced methods known to sheet metal science are employed in producing them. Practically freezeproof. They will stand a greater number of freeze-ups without damage than any other radiator, due to their patented advanced construction. Built entirely of brass. The top tank is stamped into a design which acts as a reinforcement in itself. Ridge joints, the strongest construction known, are together, eliminating any chance for leakage.

The radiator is encased in a strong, handsome shell—black enamel finish—oven baked to a high luster and hammer hardness. It is quickly detachable, but so fits the core unit that rattling is impossible. Shell not included with the 1924 model. A wing type filler cap of graceful design lends a final touch of beauty to the Hexcel. The Special Truck Radiator has closer cell construction with about 50 per cent more water tubes. Designed to withstand the excessive vibration in truck service. Packed 1 in a crate. No. 1923 weighs 43 lbs.; No. 1924, 44 lbs., and No. T23, 49 lbs. crated.

No. 1923—For Fords 1923 and previous, with shell. .....Each, **$26.50**
No. 1924—For Fords 1924, without shell.....Each, **$26.50**
No. T23—Special for Ford Truck 1923 and previous, with shell.....Each, **$29.50**

Fenders for Ford

These fenders are exact duplicates of the original Ford pleasure car Crown Fenders. This permits replacing one fender without buying a full set. Made of heavy fender sheet steel and finished with high grade baked enamel. Regularly carried for Ford Models 1917 and since.

Packed one or five pairs to a crate of either fronts or rears. Weight 88 lbs. per set crated.

	Per pair
Front Fenders. Replaces Ford Nos. 4800B-4801B	$12.50
Rear Fenders. Replaces Ford Nos. 4802F-4803F	$ 9.00
Full Set Front and Rear Fenders	Per set, $21.00

Fenders for Ford Trucks

No. 3 Truck Fender is manufactured for installation on Ford one-ton trucks, Smith-Form-a-Trucks, and all other Ford truck units, the rear wheels of which are equipped with solid rubber tires. Packed one or five pair in a crate. Weight 28 lbs. per pair crated.

No. 3.....Per pair, **$8.50**

No. 5 Truck Fender is exactly the same in construction as the No. 3 listed and described above, except that it is of larger dimensions for installation on Ford one-ton trucks or truck units, which are equipped with the large pneumatic tires. It is furnished with two irons, the same as the No. 3. Packed one or five pair in a crate. Weight 32 lbs. per pair crated.

No. 5.....Per pair, **$9.50**

Fenders for Ford Commercial Cars

Finished in high grade black enamel, and are made so that they will match the front crown fenders furnished with the Ford car or truck. Have side curtains to keep dirt and mud from the sides of the bodies.

These Fenders are designed to be used on light delivery Ford trucks where a Ford touring car or roadster is transformed into a delivery car by the addition of a truck body. Packed one or five pairs in a crate. Weight 28 lbs. per pair crated.

No. 1.....Per pair, **$8.30**

Ford Running Board Tool Boxes

Made of heavy gauge steel. The sides are welded to the bottom and the lid securely fastened to the side by two strong hinges. Each box is furnished with genuine Yale lock and two "suit case" type catches with strong springs securely holding the lid in position. The lid is rounded and has no sharp edges. Each box is finished with a heavy coat of high-grade black enamel, baked on at a high temperature. Weight—No. 622, 8 lbs.; No. 625, 9 lbs.

No. 622—22 in. long, 9 in. wide, 7¼ in. high..Each, **$4.20**
No. 625—25 in. long, 7¾ in. wide, 7 in. high..Each, **$4.20**

Slip-On Bodies for Ford Roadster

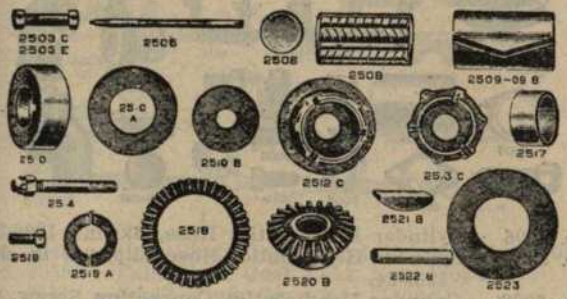
Made in 2 sizes, 54 and 60 ins. long, 8 in. panel, 5 in. flare. Note the heavily ironed sides and flare boards. Complete with battery box door and drop endgate. Painted black.

No. 0250—54-inch. Weight 75 lbs.....Each, **$40.00**
No. 0260—60-inch. Weight 85 lbs.....Each, **$42.00**

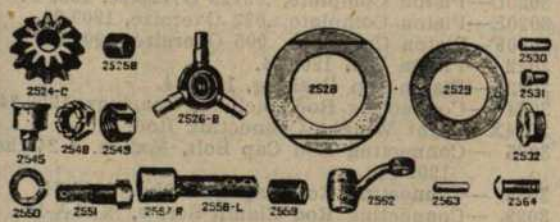
Repair Parts to Fit Ford

These parts are made by one of the largest manufacturers of replacement parts for Ford. Materials are carefully selected and they are guaranteed to fit same as original parts.

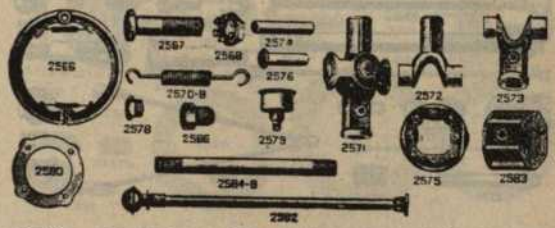
For list prices use regular Ford parts price list, except on items marked * refer to index and catalog page for full listing of similar replacement parts such as Axles, Gaskets, Springs, etc.



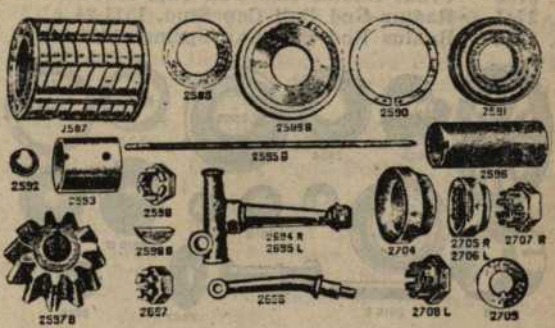
No. 2501 —Axle Housing, right, 1915-24.
No. 2502 —Axle Housing, left, 1915-24.
No. 2503C—Axle Housing Bolt and Nut, $\frac{7}{16}$x1$\frac{1}{16}$-in., 1909-13.
No. 2503E—Axle Housing Bolt and Nut, $\frac{7}{16}$x1$\frac{7}{16}$-in., 1913-24.
*No. 2505 —Axle Shaft, 1912-24.
No. 2506 —Axle Shaft Washer, 1$\frac{1}{32}$ in. dia. fibre, 1909-24.
No. 2508 —Axle Shaft Roller Bearing, 2$\frac{13}{64}$x4-in., 1909-24.
No. 2509 —Axle Shaft Roller Bearing Sleeve, right, 4 in. long, 1909-24.
No. 2509B—Axle Shaft Roller Bearing Sleeve, left, 4 in. long, 1909-24.
No. 2510 —Axle Housing Cap, 2$\frac{13}{16}$ in. dia., 1909-19.
No. 2510A—Axle Outer Roller Bearing Steel Washer, 2$\frac{11}{32}$ in., 1909-24.
*No. 2510B—Axle Outer Roller Bearing Felt Washer, 2$\frac{7}{16}$ in., 1909-24.
No. 2512C—Diff. Case, left, 1914-24.
No. 2513C—Diff. Case, right, 1914-24.
No. 2514C—Diff. Case Bolt, 1922-24.
No. 2515 —Diff. Case Stud Nut, 1909-24.
No. 2518 —Diff. Drive Gear, 40 teeth, 1909-24.
No. 2519 —Diff. Gear Screw, $\frac{7}{16}$x$\frac{31}{32}$-in., 1909-24.
No. 2519A—Diff. Gear Lock Ring, 1909-24.
No. 2520B—Diff. Gear, 24 teeth, 1909-24.
No. 2521B—Diff. Gear Key, 1$\frac{3}{8}$ in. long, 1911-24.
No. 2523 —Diff. Gear Thrust Washer Fibre, 3$\frac{1}{16}$ in. dia., 1909-14.



No. 2524C—Diff. Pinion, 12 teeth, 1915-24.
No. 2526B—Diff. Spider, 1909-24.
No. 2528 —Diff. Thrust Washer, 3$\frac{3}{4}$ in. dia. metal, 1909-24.
No. 2528A—Diff. Thrust Washer (Bronze), 3$\frac{3}{4}$ in. dia., 1909-24.
No. 2529 —Diff. Thrust Plate, 3$\frac{3}{4}$ in. dia. steel, 1909-24.
No. 2531 —Diff. Thrust Plate Pin, 1917-24.
No. 2532 —Diff. Housing Oil Plug, $\frac{3}{4}$ in. x 24 thds., 1909-24.
No. 2545 —Rear Axle Grease Cup, 1909-24.
No. 2548 —Radius Rod Nut, $\frac{5}{8}$-in. x 18 thds., 1909-24.
No. 2549 —Radius Rod Lock Nut, $\frac{5}{8}$-in. x 18 thds., 1909-24.
No. 2550 —Radius Rod Lock Washer, $\frac{5}{8}$-in., 1909-24.
No. 2551 —Radius Rod Bolt, $\frac{1}{2}$x1$\frac{1}{2}$-in., 1909-24.
No. 2551B—Radius Rod Bolt Nut, 1909-24.
No. 2557R—Hub Cam Shaft, right, 3$\frac{1}{8}$-in. long, 1909-24.
No. 2558L—Hub Cam Shaft, left, 3$\frac{1}{8}$-in. long, 1909-24.
No. 2559 —Hub Cam Shaft Bushing, $\frac{1}{2}$-in. bore, $\frac{11}{16}$-in. dia., 1909-24.
No. 2562 —Cam Shaft Lever, $\frac{1}{2}$-in. bore, 1909-24.
No. 2563 —Cam Shaft Lever Pin, $\frac{5}{8}$x$\frac{7}{8}$-in., 1909-24.
No. 2564 —Lever Clevis Pin, $\frac{7}{16}$x1-in., 1909-24.



No. 2566 —Hub Brake Shoe, Cast Iron, 1909-24.
No. 2567 —Brake Shoe Support Bolt, $\frac{1}{2}$x1$\frac{7}{8}$-in., 1909-24.
No. 2568 —Brake Shoe Support Nut (same as 2551B), 1909-24.
No. 2570B—Brake Shoe Coil Spring, 3$\frac{3}{8}$ in. long, 1913-24.
No. 2571 —Universal Joint Assembly, 1909-24.
No. 2574 —Joint Knuckle Pin, $\frac{3}{32}$x1$\frac{1}{2}$-in., 1909-24.
No. 2576 —Joint Ring Rivets (per set of 4), $\frac{1}{4}$x1$\frac{1}{8}$-in., 1909-24.
No. 2578 —Joint Housing Plug, $\frac{1}{2}$-in. x 20 thds., 1909-24.
No. 2579 —Ball Joint Grease Cup, $\frac{1}{4}$-in. pipe thds., 1909-24.
*No. 2580 —Ball Cap Gasket, 1909-24.
No. 2582 —D. S. Tubing, 1911-24.
No. 2583 —D. S. Bearing Housing Forging, 1920-24.
No. 2584B—D. S. R. B. Cap Screw, $\frac{13}{32}$x4$\frac{5}{8}$-in., 1912-24.
No. 2584C—D. S. R. B. Stud Nut, 1912-24.
No. 2586 —D. S. R. B. Housing Set Screw, $\frac{1}{2}$-in. x 20 thds., 1911-24.



No. 2587 —D. S. Roller Bearing, 2$\frac{5}{8}$ in. long, 1911-24.
No. 2588 —D. S. R. B. Distance Plate, 2$\frac{1}{32}$ in. dia., 1911-21.
No. 2589B—D. S. Ball Bearing Assembly, 1911-21.
No. 2590 —D. S. Ball Retainer, 2$\frac{13}{16}$ in. dia., 1911-21.
No. 2591 —D. S. Ball Thrust Collar, 2$\frac{1}{4}$ in. dia., 1911-24.
No. 2592 —D. S. Ball Bearings (same as 2811), 1911-21.
No. 2593 —D. S. Roller Bearing Sleeve, 2$\frac{5}{8}$ in. dia., 2$\frac{7}{8}$ in. long, 1911-21.
No. 2595B—D. S. only, 1$\frac{3}{32}$x53$\frac{11}{16}$-in., 1911-24.
No. 2596 —D. S. Sleeve, 1-in. bore, 3$\frac{1}{16}$ in. long, 1911-24.
No. 2597B—D. S. Pinion, Standard, 11 teeth, 1911-24.
No. 2597C—D. S. Pinion, Low Gear, 10 teeth, 1911-24.
No. 2598 —D. S. Castle Nut, $\frac{5}{8}$-in. x 18 thds., 1911-24.
No. 2598B—D. S. Pinion Key, 1911-24.
No. 2694 —Spindle Body, right, complete with Cones and Washer, 1911-24
No. 2694B—Spindle Body, right, less Cones and Washer, 1911-24.
No. 2695 —Spindle Body, left, complete with Cones and Washer, 1911-24.
No. 2695B—Spindle Body, left, less Cones and Washer. 1911-24.
No. 2696 —Spindle Arm, right or left, 1911-19.
No. 2697 —Spindle Arm Nut (same as 2548), 1911-24.
No. 2704 —Stationary Cone, 1$\frac{5}{8}$-in. bore, 1909-24.
No. 2705 —Adjusting Cone, right thread, $\frac{3}{4}$-in. x 16 thds., 1909-24.
No. 2706 —Adjusting Cone, left thread, $\frac{3}{4}$-in. x 16 thds., 1909-24.
No. 2707 —Spindle Nut, right thread, $\frac{3}{4}$-in. x 16 thds., 1909-24.
No. 2708 —Spindle Nut, left thread, $\frac{3}{4}$-in. x 16 thds., 1909-24.
No. 2709 —Spindle Washer, $\frac{33}{64}$-in. hole x 1$\frac{3}{8}$ in., 1909-24.

Repair Parts to Fit Ford—Continued

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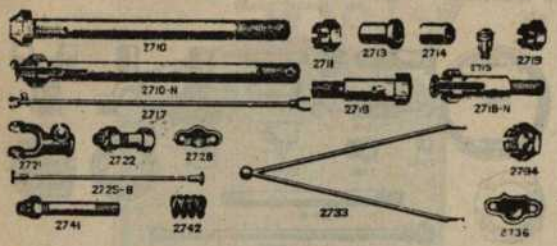
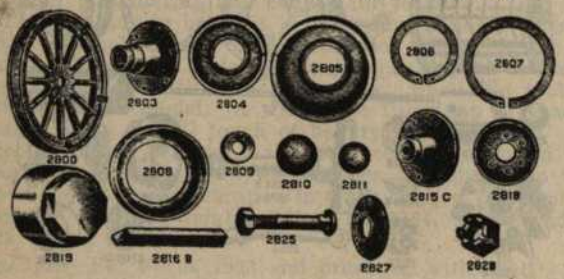
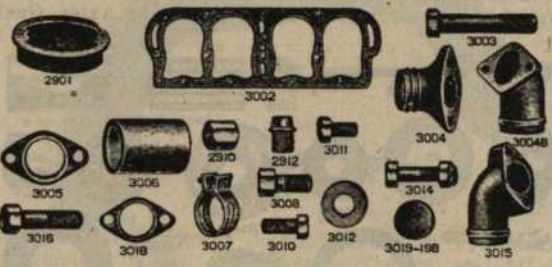


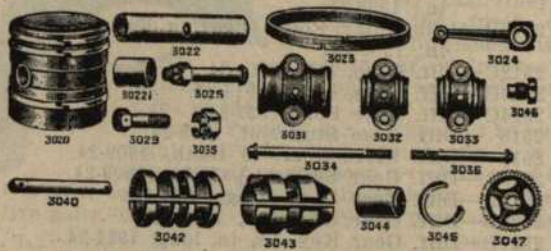
No. 2710 —Spindle Bolt with Oiler, ½x6¾-in., 1910-24.
No. 2711 —Spindle Bolt Nut (same as 2551B), 1909-24.
No. 2713 —Spindle Body Bushing (pair), ½-in. bore, 1909-24.
No. 2714 —Spindle Arm Bushing, ⅞-in. bore, 1⅛ in. dia., 1 in. long, 1909-24.
No. 2715 —Spindle Oiler (same as 3176C), 1919-24.
No. 2717 —Spindle Connecting Rod, 46¾ in. long, 1909-24.
No. 2718 —Spindle Conn. Rod Bolt with Oiler, ⅞x2¼-in., 1909-24.
No. 2719 —Spindle Conn. Rod Bolt Nut, ⅞-in. x 20 thds., 1909-24.
No. 2721C—Spindle Conn. Rod Yoke, 1919-24.
No. 2725B—Steering Gear Conn. Rod (includes Ball Sockets), 1909-24.
No. 2728 —Ball Socket Cap, 1909-24.
No. 2733 —Front Radius Rod, 1909-19.
No. 2734 —Front Radius Rod Nut, 1909-24.
No. 2736 —Front Radius Rod Ball Cap, 1909-24.
No. 2741 —Radius Rod Ball Cap Stud, 1911-24.
No. 2742 —Radius Rod Ball Cap Spring, 1911-24.



*No. 2800 —Front Wheel, Clincher, 30x3, 1909-24.
No. 2803 —Front Hub Assembly with Ball Bearings, 1909-24.
No. 2803B—Front Hub with R. B. Cups, 1909-24.
No. 2804 —Outer Race, 1⅝ in. dia., 1909-24.
No. 2804B—Outer Race, Assembled with Balls, 1909-24.
No. 2805 —Inner Race, 2⅜ in. dia., 1909-24.
No. 2805B—Inner Race, Assembled with Balls, 1909-24.
No. 2806 —Outer Ball Retainer, 1⅝ in. dia., 1909-24.
No. 2807 —Inner Ball Retainer, 2 11/32 in. dia., 1909-24.
No. 2808 —Dust Ring, Steel, 2⅜ in. dia., 1909-24.
*No. 2809 —Front and Rear Hub Felt Washer, 2½ in. dia., 1909-24.
No. 2810 —Large Balls, ½-in., 1909-24.
No. 2811 —Small Balls, ⅜-in., 1909-24.
No. 2815C—Rear Hub, 1912-24.
No. 2816B—Rear Hub Key, ¼x¼x2 11/32-in., 1912-24.
No. 2818 —Rear Hub Brake Drum, 3-in. hole, 8 in. dia., 1909-24.
No. 2819 —Rear Hub Cap, 2⅛-in. x 24 thds., 1909-24.
No. 2825 —Rear Hub Bolt, ⅜x2½-in., x 16 thds., 1911-24.
No. 2825B—Hub Bolt Nut, 1911-24.
No. 2827 —Hub Flange, 6 in. dia., 1911-24.
No. 2828 —Rear Hub Lock Nut, ⅝-in. x 18 thds., 1912-24.
No. 2901 —Filling Plug, 2⅛-in., 1909-24.
No. 2908 —Pet Cock (same as 3079), 1909-24.
No. 2910 —Feed Pipe Pack Nut, ½-in. x 18 thds., 1909-24.
No. 2912 —Sediment Plug, 1909-24.
No. 3000C—Cylinder, 1909-24.
*No. 3002 —Cylinder Head Gasket, 1909-24.
No. 3003 —Cylinder Head Cap Screw, ⅞x2⅛-in., 1909-24.
No. 3004 —Cylinder Head Outlet Connection, 1909-16.
No. 3004B—Cylinder Head Outlet Connection, 1917-24.
*No. 3005 —Cylinder Head Outlet Connection Gasket, 1909-24.



*No. 3006 —Cylinder Head Outlet Hose, 2x4-in., 1909-24.
No. 3007 —Cylinder Head Outlet Hose Clip, 2⅜ in. dia., 1909-24.
No. 3008 —Cylinder Head Outlet Connection Screw, ⅞x1⅛-in., 1909-24.
No. 3010 —Cylinder Cover Bolt and Nut (same as 4808 and 2515), 1909-24.
No. 3011 —Cylinder Cover Cap Screw, ⅜x1⅛-in., 1909-24.
*No. 3012 —Cylinder Cover Felt, 1909-24.
No. 3014 —Cylinder Cover and Crank Case Bolt and Nut (same as 3362 and 2515), 1909-24.
No. 3015 —Cylinder Water Inlet Connection, Cast Iron, 1909-24.
No. 3016 —Cylinder Inlet Connection Screw, ⅞x1½-in., 1909-24.
*No. 3018 —Cylinder Water Inlet Gasket, Copper, 1909-24.
No. 3019 —Cylinder Water Jacket Plug, ½-in. Pipe Plug, 1909-13.
No. 3019B—Cylinder Water Jacket Plug, 1914-24.



No. 3020 —Piston Complete, 3¾ in. dia., 1909-24.
No. 3020C—Piston Complete, .0025 Oversize, 1909-24.
No. 3020D—Piston Complete, .03125 Oversize, 1909-24.
No. 3020E—Piston Complete, .033 Oversize, 1909-24.
No. 3020F—Piston Complete, .005 Oversize, 1909-24.
No. 3022 —Piston Pin, 1909-24.
No. 3022½—Piston Pin Bushing, 1909-24.
No. 3024 —Connecting Rod, includes Bearings, 1909-24.
No. 3024X—Light Weight Connecting Rod.
No. 3025 —Connecting Rod Cap Bolt, ⅜x2-in. x 24 thds., 1909-24.
No. 3026 —Connecting Rod Cap Bolt Nut, 1909-24.
No. 3029 —Connecting Rod Clamp Screw, ⅜x1⅛-in., 1909-24.
No. 3031 —C. S. Rear Bearing Cap, 3 5/32 in. long, babbitted, 1909-24.
No. 3032 —C. S. Front Bearing Cup, 1⅝ in. long, babbitted, 1909-24.
No. 3033 —C. S. Center Bearing Cap, 2 5/32 in. long, babbitted, 1909-24.
No. 3034 —C. S. Bearing Bolt, Center and Front, ½x6⅛ x 20 thds., 1909-24.
No. 3035 —C. S. Bearing Bolt Nut (same as 2551B), 1909-24.
No. 3036 —C. S. Rear Bearing Bolt, ½x4 5/32-in., 1909-24.
No. 3038 —C. S. Bearing Liner, Center and Front, 1⅛ in. long, Brass, 1909-24.
No. 3040 —C. S. Starting Pin, ⅜x2¾ in., 1909-20.
No. 3040B—C. S. Starting Pin, 1920-24.
No. 3042 —Cam Shaft Front Bearing, 2 in. long, 1909-24
No. 3043 —Cam Shaft Center Bearing, 2⅛ in. long. 1909-24.
No. 3044 —Cam Shaft Rear Bearing, 1⅞ in. long, 1909-24.
No. 3045 —Cam Shaft Bearing Ring, ⅛x1⅛, 1909-24.
No. 3046 —Cam Shaft Bearing Set Screw, ⅞x⅝, 1909-24.
No. 3047 —Time Gear, Large (on cam shaft), 1909-24.
No. 30 —Time Gear, Spiral (on cam shaft), 1909-24.
No. —Time Gear, Spiral (on crank shaft), 1909-24.

Repair Parts to Fit Ford—Continued

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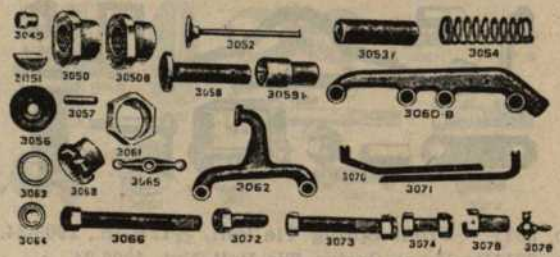
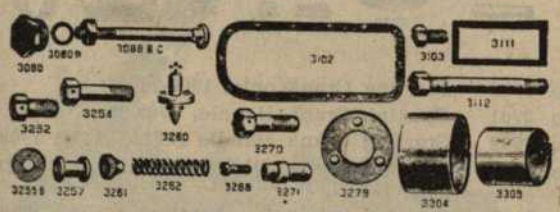
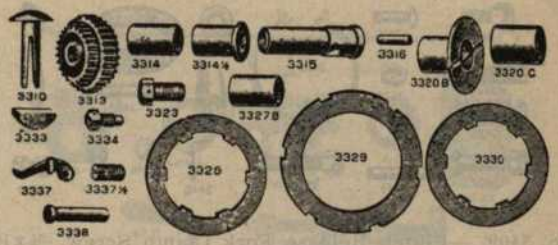


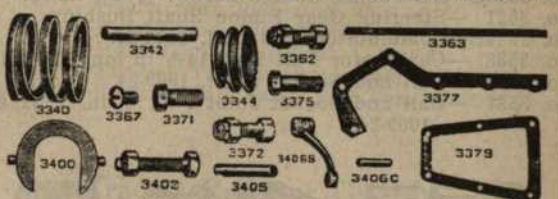
No. 3049 —Cam Shaft Gear Dowel Pin, $\frac{3}{8}$x$\frac{7}{16}$-in., 1909-24.
No. 3050B—Cam Shaft Gear Lock Nut, 1909-24.
No. 3051 —Small Time Gear Key, 1909-24.
No. 3052 —Valve Standard, 1909-24.
No. 3053½—Valve Bushing, $\frac{5}{8}$ in. O. D. x 2 in. long, 1909-24.
No. 3054 —Valve Spring, 1909-24.
No. 3056 —Valve Spring Seat, 1909-24.
No. 3057 —Valve Spring Seat Pin, 1909-24.
No. 3058 —Push Rod, Standard, 1909-24.
No. 3058B—Push Rod, $\frac{1}{64}$-in. oversize stem, 1909-24.
No. 3059½—Push Rod Bushing, Iron, 1909-24.
No. 3060B—Exhaust Manifold, 1913-24.
No. 3061 —Exhaust Pipe Pack Nut, 1$\frac{7}{8}$-in. x 18 thds., 1909-24.
No. 3062 —Inlet Pipe, 1909-24.
*No. 3063 —Inlet and Exhaust Pipe Gasket, 1½-in. O. D. Copper, 1909-24.
No. 3064 —Inlet and Exhaust Pipe Gland, 1¼ in. dia., Iron, 1909-24.
No. 3065 —Inlet and Exhaust Pipe Clamp, 2¾ in. long, 1909-24.
No. 3066 —Inlet and Exhaust Clamp Stud, $\frac{3}{8}$x3¼-in., 1909-24.
No. 3066B—Inlet and Exhaust Clamp Stud Nut, 1909-24.
No. 3068 —Breather Pipe, 1$\frac{7}{8}$ in. long, 1909-24.
*No. 3070 —Crank Case and Cylinder Gasket, left, Cork, 1909-24.
*No. 3071 —Crank Case and Cylinder Gasket, right, Cork, 1909-24.
No. 3072 —Crank Case and Cylinder Cover Cap Screw, $\frac{3}{8}$x1-in., 1909-24.
No. 3073 —Crank Case Arm Bolt, Side, $\frac{3}{8}$x2¼-in., 1909-24.
No. 3074 —Crank Case Arm Bolt, Top, $\frac{3}{8}$x$\frac{33}{64}$-in., 1909-24.
No. 3074B—Crank Case Arm Bolt Nut (same as 2515), 1909-24.
No. 3076C—Crank Case Front Bearing and Spring Clip Nut (same as 2548), 1921-24.
No. 3078 —Crank Case Front Bearing Screw, $\frac{7}{16}$x$\frac{7}{8}$-in., 1909-24.
No. 3078B—Crank Case Front Bearing Screw (same as 3008), 1921-24.
No. 3079 —Crank Case Oil Cock, 1909-24.



No. 3080 —Crank Case Drain Cup Plug (same as 2532), 1909-24.
*No. 3080B—Crank Case Drain Cup Plug Gasket, 1909-24.
No. 3088B—Engine Pan and Hood Board Bolt, ¼x3¼-in., 1909-24.
No. 3088C—Engine Pan and Hood Board Bolt, ¼x3$\frac{5}{8}$-in., 1909-24.
*No. 3102 —Crank Case Lower Cover Gasket, Cork, 1912-24.
No. 3103 —Crank Case Lower Cover Screw, $\frac{5}{16}$x$\frac{7}{16}$-in., 1912-24.
*No. 3111 —Cylinder Valve Cover Gasket, Cork, 1912-24.
No. 3112 —Cylinder Valve Cover Screw, $\frac{3}{8}$x2$\frac{33}{64}$-in., 1912-24.



No. 3162B—Com. Case Support Bolt, Starter Type, 1919-24.
No. 3221 —Com. Case with Fibre, 1912-24.
No. 3254 —Magnet Bolt, $\frac{3}{8}$x1½-in., 1909-24.
No. 3260 —Magneto Contact Assembly on Trans. Cover, 1909-24.
No. 3270 —Fly Wheel Cap Screw, $\frac{7}{16}$x1$\frac{5}{16}$-in., 1909-24.
No. 3271 —Fly Wheel Dowel Pin, $\frac{13}{32}$x1$\frac{5}{16}$-in., 1909-24.
*No. 3279 —Magneto Contact Washer on Trans. Cover, Cork, 1909-24.
No. 3304 —Trans. Reverse Gear Bushing, 2$\frac{5}{16}$-in. ream, 1909-24.
No. 3305 —Trans. Rev. and S. S. Rivet, $\frac{7}{32}$x1$\frac{1}{16}$-in., 1909-24.
No. 3310 —Trans. Brake Drum Rivet, $\frac{7}{32}$x1$\frac{1}{16}$-in., 1909-24.
No. 3313 —Trans. Triple Gear Assembly, 1909-24.
No. 3314½—Trans. Triple Gear Flanged Bushing, 1$\frac{3}{16}$-in. dia. x 1$\frac{5}{16}$-in., 1911-24.
No. 3315 —Trans. Triple Gear Shaft, $\frac{11}{16}$-in. dia. x 2½-in., 1909-24.
No. 3316 —Trans. Triple Gear Riveting Pin, $\frac{5}{16}$x1$\frac{5}{16}$-in., 1909-24.
No. 3320B—Trans. Driven Gear Sleeve Bushing, 1909-24.
No. 3320C—Trans. Driven Gear Sleeve Bushing, 1½ in. long, 1909-24.
No. 3323 —Trans. Driving Plate Screw (same as 3371), 1909-24.
No. 3327B—Trans. Driving Plate Bushing, 1⅛x1¼ in., 1909-24.
No. 3328 —Trans. Clutch Disc, small, 6-in. dia., 1909-24.
No. 3329 —Trans. Clutch Disc, large, 6$\frac{7}{16}$-in., 1909-24.
No. 3330 —Trans. Distance Plate, 1909-24.
No. 3337 —Trans. Clutch Finger, 1909-24.
No. 3337½—Trans. Clutch Finger Screw, $\frac{3}{8}$x¾-in. x 24 thds., 1909-24.
No. 3338 —Trans. Clutch Finger Pin, $\frac{11}{32}$x1$\frac{5}{8}$-in., 1909-24.



No. 3340 —Trans. Clutch Spring, 2$\frac{5}{8}$-in. dia. x 2¾-in. long, 1909-24.
No. 3342 —Trans. Clutch Spring Thrust Ring Pin, $\frac{5}{16}$x2$\frac{3}{8}$-in., 1909-24.
No. 3344 —Trans. Clutch Shift, 1909-24.
No. 3362 —Trans. Cover Bolt, 1909-24.
No. 3362B—Trans. Cover Bolt Nut (same as 2515), 1909-24.
*No. 3363 —Trans. Cover Gasket (front), $\frac{5}{32}$x½x15½-in. felt, 1909-24.
No. 3367 —Trans. Cover Door Screw, $\frac{5}{16}$x½-in., 1909-24.
No. 3371 —Universal Ball Cap Screw, $\frac{3}{8}$x$\frac{13}{16}$-in., 1909-24.
No. 3372 —Universal Ball Cap Bolt and Nut (same as 3362 and 2515), 1909-24.
No. 3375 —Trans. Cover Screw (same as 3072), 1909-24.
*No. 3377 —Trans. Cover Gasket, Cork, 1909-24.
*No. 3379 —Trans. Cover Door Gasket, Cork, 1911-24.
*No. 3381 —Bendix Cover Gasket, 1919-24.
No. 3400 —Trans. Clutch Release Ring, 3$\frac{13}{16}$ in. long, 1909-24.
No. 3402 —Clutch Lever and Shaft, 1913-24.
No. 3405 —Clutch Lever Pin, ¼x$\frac{13}{16}$-in., 1909-24.
No. 3406B—Clutch Release Fork, right or left, 1913-24.
No. 3406C—Clutch Release Fork Pin (same as 3405), 1913-24.

Repair Parts to Fit Ford—Continued

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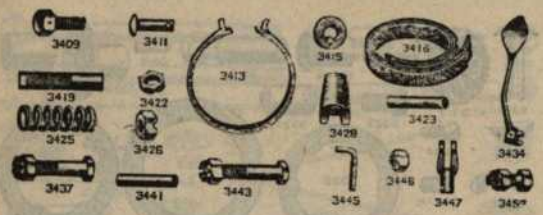
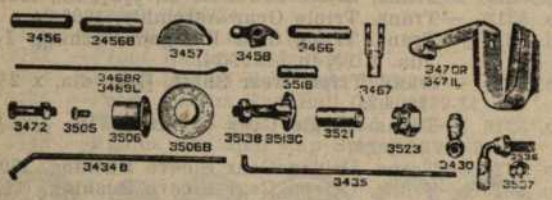
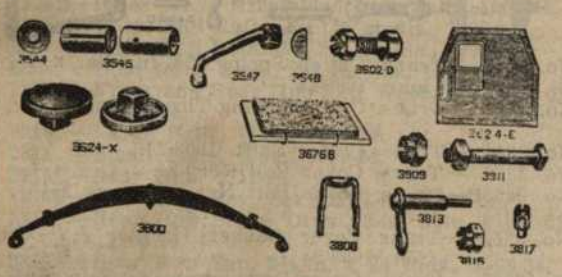


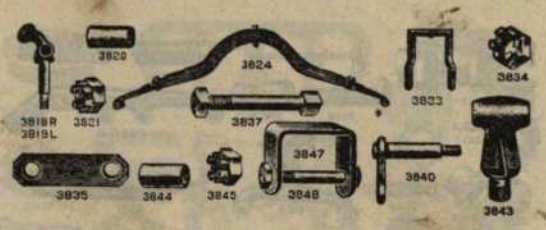
No. 3409 —Clutch Release Fork Clamp Screw, $\frac{3}{8}$x$1\frac{13}{16}$-in., 1909-14.
No. 3411 —Clutch Lever Clevis Pin (same as 2564), 1909-24.
No. 3413 —Transmission Band Assembly, 1909-24.
No. 3415 —Transmission Band Washer, $\frac{33}{64}$-in. hole x $\frac{7}{8}$ in. dia., 1909-24.
*No. 3416 —Transmission Band Lining, 1909-24.
No. 3419 —Transmission Band Adj. Screw, $\frac{3}{4}$x$3\frac{1}{8}$-in., 1909-24.
No. 3422 —Transmission Band Brass Rivet, $\frac{5}{64}$x$\frac{1}{2}$, 1909-17.
No. 3425 —Transmission Band Spring, Coil, 1909-24.
No. 3426 —Transmission Band Adj. Nut, $\frac{7}{16}$-in. x 20 thds., 1909-24.



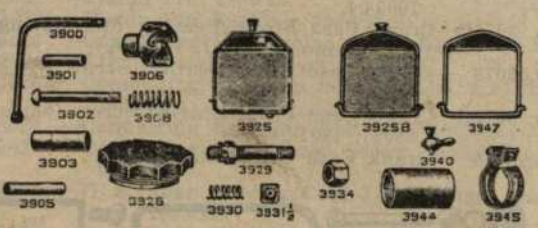
No. 3466 —Hub Brake Lever Pin (same as 3405), 1909-24.
No. 3467 —Hub Brake Lever Clevis (same as 3447), 1909-24.
No. 3468 —Hub Brake Pull Rod, R., 54⅛ in. long, 1909-24.
No. 3469 —Hub Brake Pull Rod, L., 54⅛ in. long, 1909-
No. 3470 —Brake Rod Support, R., 1909-24.
No. 3471 —Brake Rod Support, L., 1909-24.
No. 3472 —Brake Rod Support Bolt, ¼x1⅛-in., 1909-24.
No. 3513C—St. Tubing Flange Screw, $\frac{5}{16}$x$1\frac{5}{16}$-in., 1913-24.
No. 3521 —Steering Gear Pinion Shaft Bushing.
No. 3534B—Commutator Pull Rod, 1912-24.
No. 3535 —Carburetor Pull Rod, $14\frac{5}{16}$ in long, 1909-24.
No. 3536 —Ball and Socket Joint, 1909-24.
No. 3537 —Ball and Socket Joint Nut, $\frac{7}{32}$-in. x 32 thds., 1909-24.



*No. 3544 —St. Bracket Felt Washer, 1909-24.
No. 3545 —St. Bracket Bushing, ¾-in. bore, brass, 2 pieces, 1909-24.
No. 3547 —St. Gear Ball Arm, 1909-24.
No. 3548 —St. Gear Ball Arm Key, 1909-24.
No. 3602D—Body Bracket Connecting Bolt and Nut (same as 2719), 1916-24.
*No. 3624E—See Index for Rub Tex Mats.
No. 3634H—Dash (Steel), 1923.
No. 3634J —Dash (Steel), 1923.
No. 3808 —Front Spring Clip, 1909-20.
No. 3809 —Front Spring Clip Nut (same as 2551B), 1909-24.
No. 3810 —Front Spring Clip Bar, 1921-24.



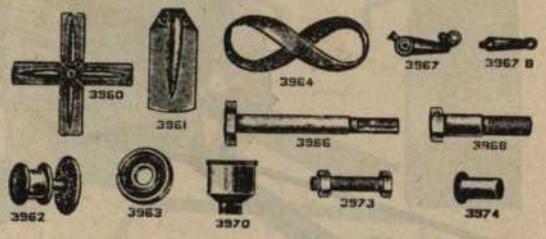
No. 3811 —Front Spring Tie Bolt, $\frac{5}{16}$x$2\frac{1}{4}$-in., 1909-24.
No. 3811B—Front Spring Tie Bolt Nut, 1909-24.
No. 3813 —Front Spring Hanger, 1909-24.
No. 3815 —Spring Hanger Nut (same as 2719), 1909-24.
No. 3818 —Front Spring Perch, right, 1909-19.
No. 3819 —Front Spring Perch, left, 1909-19.
No. 3820 —Front Spring Perch Bushing, 1909-24.
No. 3821 —Front Spring Perch Nut (same as 2828), 1909-21.
No. 3821B—Front Spring Perch Nut, 1921-24.
*No. 3824B—Rear Spring, 9-leaf Sedan, 1922-24.
No. 3833 —Rear Spring Clip, 1909-24.
No. 3833B—Rear Spring Clip, 9-leaf Spring Sedan, 1922-24.
No. 3834 —Rear Spring Clip Nut (same as 2548), 1909-24.
No. 3835 —Rear Spring Clip Bar, $\frac{3}{8}$x$1\frac{1}{8}$x4x$\frac{7}{16}$-in., 1909-24.
No. 3837 —Rear Spring Tie Bolt, $\frac{3}{8}$x$2\frac{13}{16}$, 1909-24.
No. 3837B—Rear Spring Tie Bolt Nut, 1909-24.
No. 3838 —Rear Spring Tie Bolt, 9-leaf Spring Sedan, 1922-24.
No. 3840 —Rear Spring Hanger, 1909-24.
No. 3843 —Rear Spring Perch, 1909-24.
No. 3844 —Rear Spring Perch Bushing, $\frac{5}{16}$-in. bore x ¾-in. dia. x 2-in., 1909-24.
No. 3845 —Rear Spring Perch Nut, $\frac{11}{16}$-in. x 16 thds., 1909-24.
No. 3847 —Front Spring Clamp Assembly with Bolt and Nut, 1909-16.
No. 3848 —Rear Spring Clamp Assembly with Bolt and Nut, 1909-17.



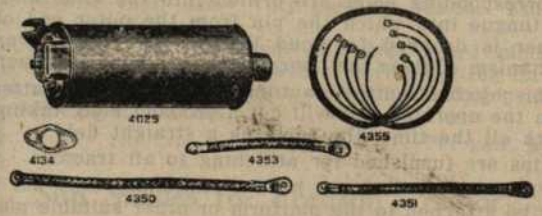
No. 3900 —Starting Crank only, 1909-22.
No. 3901 —Starting Crank Handle, 1909-22.
No. 3902 —Starting Crank Handle Bolt, ½x4⅝, 1909-22.
No. 3903 —Starting Crank Sleeve, $\frac{33}{64}$-in. bore x $\frac{33}{64}$x2¾-in., 1909-22.
No. 3905 —Starting Crank Ratchet Pin, 1⅜-in., 1909-24.
No. 3908 —Starting Crank Spring, 1909-24.
*No. 3925 —Radiator—See Index for Hexcel.
*No. 3925B—Radiator—See Index for Hexcel.
No. 3926 —Radiator Cap, 1909-24.
No. 3929 —Radiator Stud, $\frac{3}{8}$x$2\frac{7}{16}$-in., 1909-19.
No. 3930 —Radiator Stud Spring (same as 2742), 1909-24.
No. 3931½—Radiator Stud Washer Nut, ⅜-in. x 24 thds., 1909-24.
No. 3940 —Outlet Connection Cock (same as 3079), 1909-24.
*No. 3944 —Outlet Connection Hose, 1¾x2¾-in., 1909-24
No. 3945 —Outlet Connection Hose Clip, 2⅛ in. dia., 1909-24.

Repair Parts to Fit Ford—Continued

For list prices use regular Ford parts price list, except on items marked * refer to index and catalog page for full listing of similar replacement parts such as Axles, Gaskets, Springs, etc.

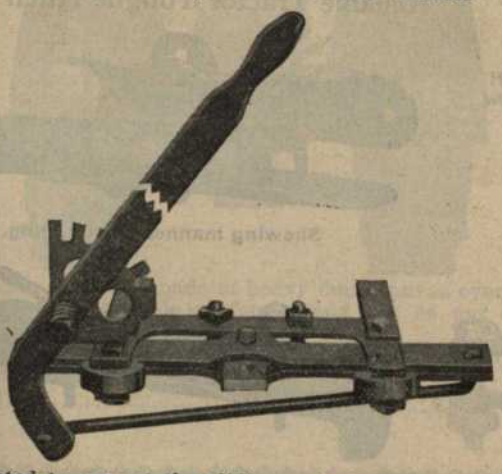


No. 3960 —Fan and Pulley Assembly, 1909-20.
No. 3961 —Fan Blade, 1909-20.
No. 3961C—Fan Blade Assembly, 1920-21.
No. 3962 —Driven Fan Pulley.
No. 3962B—Driven Fan Pulley with Bushing, 1920-24.
No. 3963 —Fan Drive Pulley, Steel, lower, 1909-20.
*No. 3964 —Fan Belts—See Index.
No. 3966 —Fan Shaft, $\frac{7}{8}$x4$\frac{5}{16}$-in., 1909-20.
No. 3967 —Fan Bracket, 1909-16.
No. 3967B—Fan Bracket, 1917-24.
No. 3968 —Fan Bracket Bolt, $\frac{1}{2}$x2$\frac{1}{8}$-in., 1909-24.
No. 3970 —Fan Grease Cup, 1909-24.
No. 3973 —Fan Adjusting Screw, $\frac{3}{8}$x1$\frac{13}{16}$-in., 1909-24.
No. 3974 —Fan Driven Pulley Bushing, 1917-20.
No. 3974B—Fan Driven Pulley Bushing, 1920-24.



No. 4025 —Muffler Assembly, 1909-20.
*No. 4134 —Carburetor Flange Gasket, 1909-24.
No. 4350 —Spark Plug Wire No. 1 Cyl., 1909-24.
No. 4351 —Spark Plug Wire, No. 2 Cyl., 1909-24.
No. 4353 —Spark Plug Wire, No. 3 and 4 Cyl., 1909-24.
No. 4355 —Commutator Wire (non-starter type), 1909-22.

Caswell Adjustable Plow Hitch



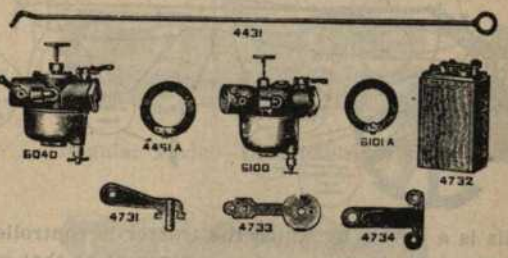
Adapted to correct the sliding and skidding tendency of tractor and plows in rolling fields.

Adjustable from the seat of the tractor while in motion, so the operator can turn a uniform furrow at all times under all conditions.

Equipped with a wooden pin breaker to prevent breakage among rocks and stumps.

Adapted to all tractors. In ordering it is necessary to specify make of tractor. Weight each, 30 lbs.

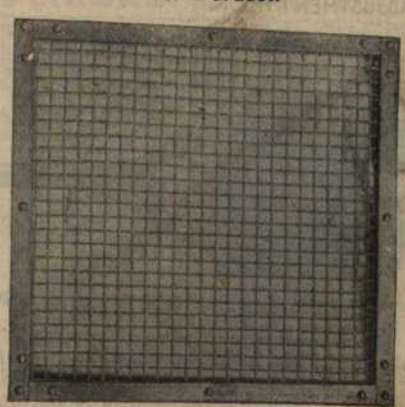
No. 1108—Adjustable Plow Hitch.....Each, **$15.00**



No. 4431 —Carburetor Priming Rod, 1909-24.
No. 4451A —Float with Lever, 1914-21.
No. 6101A —Carburetor Float Assembly, 1917-21.
No. 5006 —Switch Plug, 1914-24.
*No. 5007 —Coil Units, 3$\frac{1}{2}$x2$\frac{1}{8}$x5-in., 1914-24.
*No. 5008 —Vibrator with Tungsten Point, 1914-24.
*No. 5009 —Vibrator Bridge with Tungsten Point, 1914-24.
No. 4806B —Fender Eye Bolt, 1909-24.
No. 4808 —Front Fender Iron Bolt (Side), $\frac{3}{8}$x$\frac{33}{32}$-in., 1910-24.
No. 4808B —Front Fender Iron Bolt (Bottom), $\frac{3}{8}$x1$\frac{1}{32}$-in., 1910-24.
No. 4808C —Front Fender Apron to Frame Bolt, $\frac{1}{4}$x$\frac{5}{8}$-in., 1915-24.
No. 4808D —Front Fender Iron Bolt Nut (same as 2515), 1910-24.
No. 4814C —R. B. Shield, R., 1917-24.
No. 4815C —R. B. Shield, L., 1917-24.
No. 4819 —R. B. to Rear Fender Bolt, 1909-20.
No. 4819B —R. B. to Rear Fender Bolt, $\frac{5}{16}$x1$\frac{3}{8}$-in., 1921-24.
No. 4949 —Commutator Wire (starter type), 1923-24.
*No. 6100 —Carburetor—See Index for Kingston Carburetor.
No. 6594AX—Head Lamp Door Assembly, used with 6511DX, 1915-24.
No. 6594HX—Head Lamp Door Assembly, with Refracting Lens, 1915-24.
*No. 6594O —Head Lamp Door Assembly, without Lens.
No. 6576HX—Head Lamp Lens, Refracting, one pair in carton, 1922-24.
No. 6592X —Head Lamp Plug, with Thimble, 1915-24.
No. 6585AX—Head Lamp Reflector, 1915-24.
No. 6580X —Head Lamp Focusing Screw, 1915-24.
No. 6574BX—Head Lamp Plug Socket, 1915-24.
*No. 7669X —Electric Tail Lamp Assembly, 1915-24.
*No. 6484BX—Electric Tail Lamp Red Lens, 1915-24.

Tractor Radiator Guard

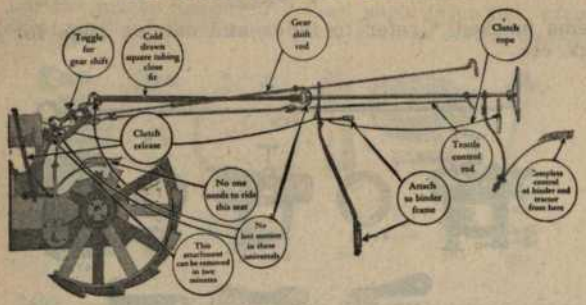
For Fordson



Prevents cornstalks, roots and sticks from striking the radiator while working in the field. Made of heavy wire over a steel frame and will last a lifetime.

No. 987—Tractor Radiator Guard.....Each, **$10.50**

Caswell Tractor Control



This is a device by which the tractor is controlled from the seat of the binder or other implement so that one man can operate both machines. It is simple, flexible, easily attached, and is positive and dependable.

The Supports for the steering post extension are rigidly clamped to the tractor, and also to the binder frame at two points.

The Steering Post is equipped with three universals which give flexibility, and eliminate all binding and cramping strain.

The Throttle Control is by means of a rod, which is accurate, positive and dependable.

The Clutch is controlled by a long lever clamped to the clutch pedal and a rope to driver's seat.

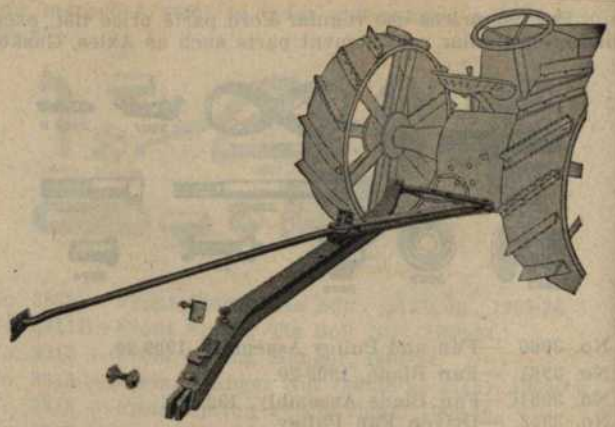
The Gear Shift is by means of a hinged rod, which is simple, positive and dependable.

The Control is especially adapted for use on Self-Binders, but may be used on two-row cultivators and other implements.

Can be used with Fordson, Samson, Twin City and Wallis Cub Tractors. Orders must state name of tractor with which the control is to be used. Weight each 85 lbs.

No. 1106—Caswell Tractor Control.....Each, **$30.00**

Caswell Binder Hitch



The main tongue is composed of a 3-inch I-beam and is attached to the binder in place of and at the same point as the truck tongue. The forward end is attached to the end of an evener which is bolted to the drawbar of the tractor crosswise of the line of travel.

The steering bar consists of a guide slidably mounted on the top flange of the tongue with a rigidly mounted pin extending upward.

A connecting rod is mounted on the outer end of the evener and also on the pin of the slide; a round hooked rod is also mounted on the same pin and adapted to be hooked into the eye nearest the grain on the binder.

Corresponding holes are drilled into the slide and also the tongue into which the pin from the outer end of the evener is dropped for road travel. The cross draw-bar mechanism enables the operator to turn square corners.

This hitch is entirely automatic, requiring no attention from the operator and will cut a crooked field, taking full swath all the time, the same as a straight field.

Clips are furnished for attaching to all tractors.

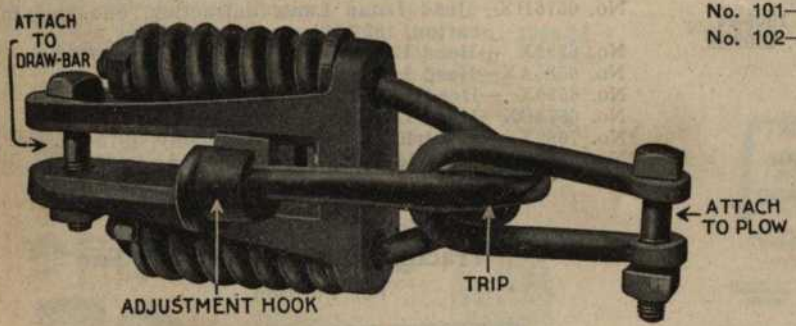
When tractor does not have a stationary draw-bar hitch may be attached to the platform or other suitable place.

Furnished in two sizes. No. 101 is for attaching the front binder to the tractor and No. 102 is used for attaching one binder behind another.

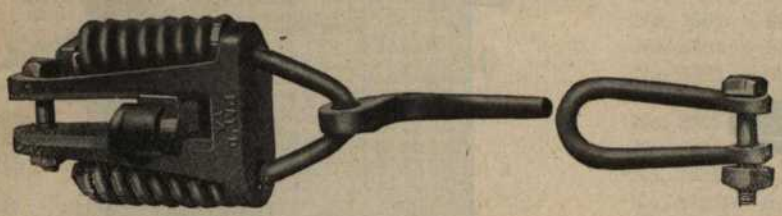
No. 101 weight 85 lbs.; No. 102, 150 lbs.

No. 101—Front Hitch.....Each, **$24.00**
No. 102—Trailer Hitch.....Each, **$36.00**

Safety Release Hitch



Showing Hitch Coupled.

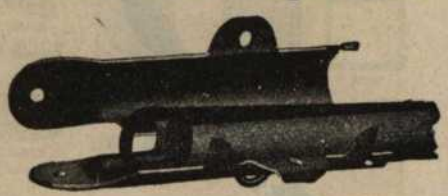


Showing Hitch Uncoupled.

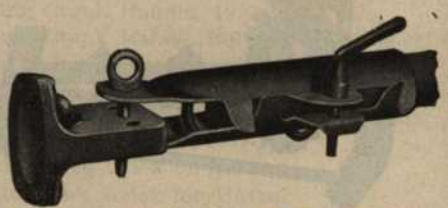
This Hitch prevents breakage of plows as it instantly uncouples the plow from the tractor when the plow strikes a rock or stump. It can be recoupled in an instant and is very quickly adjustable for 2, 3 or 4 bottom plows, or according to the weight of pull. When in proper adjustment it will uncouple only when an object has been struck which might bend, break, or injure the plow or other implement. Weight 16 lbs. each.

No. 47—Safety Release Hitch.....Each, **$10.00**

Reliable Tractor Tongue Hitch



Showing manner of attaching.

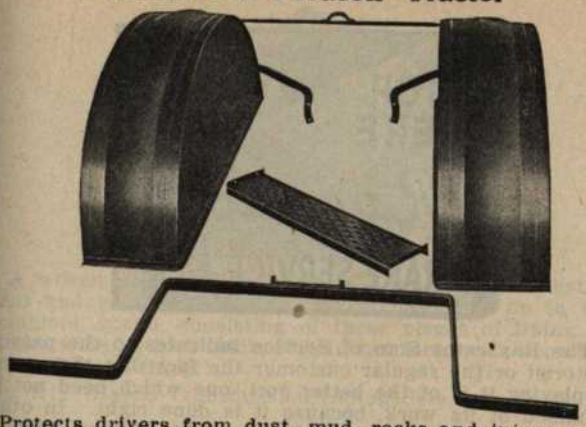


Showing Tongue Hitch attached to hitch casting of a Fordson.

This is a necessity for pulling wagons with a tractor. It gives perfect control of the wagon at all times on either up or down grades. It does not pull by the pole cap but clamps on the end of the tongue. Attached or detached very quickly by only one bolt. Will attach to the draw-bar of practically any tractor. Weight 12 lbs. each.

No. 108—Reliable Tractor Tongue Hitch.Each, **$10.00**

Fenders for Fordson Tractor



Protects drivers from dust, mud, rocks and injury, and adds appearance to the tractor. Fenders are not a luxury, but an essential. The construction of our fenders is such that they will last and give better service than any fender for the Fordson Tractor on the market.

The braces are made of heavy material to withstand practically all vibration. The bracing does not interfere with the driver getting in or out, and there is plenty of elbow room.

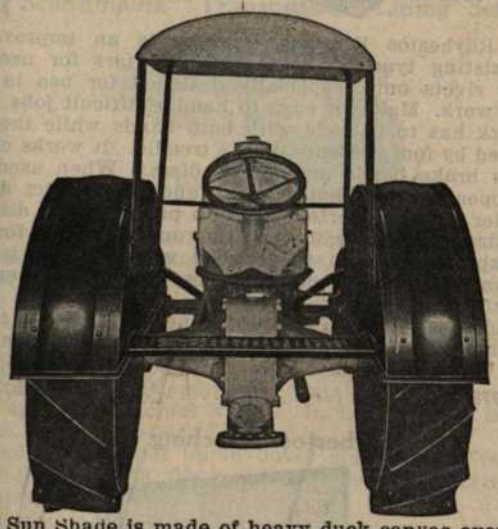
No user of Fordson Tractors should be without fenders while in practical use, as they give the driver absolute protection.

Fordson Tractors are sold without fenders and the largest percentage of tractor owners will want them. Some states require their use. Very easy to attach. Full instructions included.

Fenders are now furnished with foot board platform between fenders for convenience of driver getting on and off. Also this makes it easy to drive in standing position. Shipping weight 125 lbs.

No. 9.....Per pair, $32.80

Sun Shades for Fordson Tractor



This Sun Shade is made of heavy duck canvas over steel frame. Bolted on side of fender and can be put on by anyone in a few minutes.

Full instructions for installation are attached to each sunshade in shipping.

No. 123.....Each, $11.00

"Whitney" Roller Chains and Parts**

Furnished Either Detachable or Riveted.

Shipped from Factory Only.

Regular Model—Detachable Type.

Tractor Model—Detachable Type.

In the Detachable Chain all links on one side are riveted and all links on opposite side are detachable. In the Riveted Type all links are riveted on both sides with exception of the connecting link.

Pitch, Inch	Diam. of Roll	Width of Roll	Chain Number	Chain per Foot	Roller Link	Pin Link	Pin Link Plain	Connecting Link	Offset Link	Special Steel Cotter Pins Per 100
⅝	.400	¼	145	$0.70	$0.07½	$0.04	$0.01½	$0.10	$0.20	
	.400	⅜	146	$0.90	$0.12	$0.06	$0.02	$0.14	$0.28	
	11/32 W	7/32	101	$1.22	$0.09½	$0.05½	$0.02½	$0.08	$0.30	$0.34
	11/32 W	3/8	102	$1.28	$0.10½	$0.06	$0.02½	$0.08½	$0.32	$0.34
	11/32 W	3/8	202	$1.28	$0.10½	$0.06	$0.02½	$0.08½	$0.32	$0.34
¾	13/32 W	½	103	$1.36	$0.11	$0.06½	$0.03	$0.09½	$0.36	$0.34
	13/32 W	½	203	$1.36	$0.11	$0.06½	$0.03	$0.09½	$0.36	$0.34
	13/32 W	5/8	104	$1.52	$0.12	$0.07	$0.03	$0.10	$0.40	$0.34
	13/32 W	5/8	204	$1.52	$0.12	$0.07	$0.03	$0.10	$0.40	$0.34
	5/8 W	3/8	5	$1.88	$0.18½	$0.12	$0.05½	$0.17½	$0.54	$0.36
	5/8 W	½	6	$1.88	$0.18½	$0.12	$0.05½	$0.17½	$0.54	$0.36
	5/8 W	½	206	$1.88	$0.18½	$0.12	$0.05½	$0.17½	$0.54	$0.36
	5/8 W	5/8	7	$1.90	$0.19½	$0.13	$0.06	$0.19	$0.58	$0.36
	5/8 W	5/8	207	$1.90	$0.19½	$0.13	$0.06	$0.19	$0.58	$0.36
1	5/8 W	¾	208	$2.20	$0.21½	$0.14½	$0.06	$0.20½	$0.62	$0.36
	1/2	3/8	105	$1.66	$0.17½	$0.10	$0.04½	$0.14½	$0.44	$0.36
	1/2	½	106	$1.66	$0.17½	$0.10	$0.04½	$0.14½	$0.44	$0.36
	1/2	½	406	$1.66	$0.17½	$0.10	$0.04½	$0.14½	$0.44	$0.36
	1/2	5/8	69	$1.80	$0.18	$0.11½	$0.06	$0.17½	$0.54	$0.36
	1/2	5/8	469	$1.80	$0.18	$0.11½	$0.06	$0.17½	$0.54	$0.36
1⅛	17/32	5/8	94	$2.32	$0.25	$0.17½	$0.06	$0.23½	$0.72	$0.36
	¾ W	½	10	$1.90	$0.24	$0.16	$0.06	$0.22	$0.54	$0.36
	¾ W	5/8	11	$1.90	$0.24	$0.16	$0.06	$0.22	$0.54	$0.36
	¾ W	5/8	211	$1.90	$0.24	$0.16	$0.06	$0.22	$0.54	$0.36
	¾ W	¾	12	$2.00	$0.26	$0.18	$0.06	$0.24	$0.58	$0.36
1¼	¾ W	¾	212	$2.00	$0.26	$0.18	$0.06	$0.24	$0.58	$0.36
	5/8	½	70	$1.62	$0.20	$0.14	$0.04	$0.18	$0.46	$0.36
	5/8	½	470	$1.62	$0.20	$0.14	$0.04	$0.18	$0.46	$0.36
	5/8	5/8	71	$1.62	$0.20	$0.14	$0.04	$0.18	$0.46	$0.36
	5/8	5/8	471	$1.62	$0.20	$0.14	$0.04	$0.18	$0.46	$0.36
	7/8 W	5/8	15	$2.10	$0.32	$0.20	$0.06	$0.26	$0.58	$0.38
	7/8 W	¾	16	$2.10	$0.32	$0.20	$0.06	$0.26	$0.58	$0.38
	7/8 W	¾	216	$2.10	$0.32	$0.20	$0.06	$0.26	$0.58	$0.38
1½	7/8 W 1		17	$2.40	$0.36	$0.22	$0.08	$0.30	$0.70	$0.38
	7/8 W 1		217	$2.40	$0.36	$0.22	$0.08	$0.30	$0.70	$0.38
	¾	5/8	75	$2.18	$0.32	$0.22	$0.06	$0.28	$0.64	$0.36
	¾	¾	76	$2.18	$0.32	$0.22	$0.06	$0.28	$0.64	$0.36
1¾	1W 1		20	$2.60	$0.46	$0.30	$0.10	$0.40	$0.84	$0.42
	1W 1		220	$2.60	$0.46	$0.30	$0.10	$0.40	$0.84	$0.42
2	1⅛ W 1¼		30	$3.40	$0.68	$0.48	$0.14	$0.62	$1.12	$0.46
	1⅛ W 1¼		230	$3.40	$0.68	$0.48	$0.14	$0.62	$1.12	$0.46

For Tractor Tender Tanks, See Page 557

For Umbrellas, See Page 422

Raybestos

Brake Lining

Raybestos is a solid, woven asbestos fabric, made of 90 per cent to 95 per cent long-fabric asbestos, interwoven with brass wires, and impregnated with a special heat and wear-resisting compound that gives it a wearing life found in no other brake lining.

It contains no layers or plies nor rubber compound, and is therefore impervious to extreme heat, oil and weather conditions.

Raybestos can be used wherever a high-grade friction material is required. It is not only adaptable as a Brake Lining on automotive vehicles and trucks, but can be used also for the same purpose on mill transmission equipment, hoisting machines, elevators, mining machinery, etc.

The genuine has silver edges, and the name Raybestos stamped on every foot. As there are many imitations, it is important that you always look for these distinguishing marks.

Put up approximately 50 ft. in a roll.

GUARANTEED FOR ONE YEAR

If Raybestos fails to give one full year continuous, satisfactory service from the date it is put on the brakes, new lining will be furnished without charge. This guarantee applies to all types and weights of passenger cars and all light trucks.

List per foot.

Width Inches	Thickness 1/8-in.	5/32-in.	3/16-in.	1/4-in.	5/16-in.	3/8-in.
1	.40	.45	.50	.70	.83	.96
1⅛	.45	.50	.55	.75	.92	1.06
1¼	.50	.55	.60	.80	.98	1.16
1½	.60	.65	.70	.90	1.13	1.35
1¾	.70	.75	.80	1.00	1.27	1.54
2	.80	.85	.90	1.20	1.47	1.73
2¼	.90	.95	1.00	1.30	1.62	1.93
2½	1.00	1.05	1.10	1.50	1.81	2.12
2¾	1.10	1.15	1.20	1.60	1.96	2.31
3	1.20	1.25	1.30	1.70	2.10	2.50
3¼	1.25	1.33	1.40	1.80	2.25	2.69
3½	1.30	1.40	1.50	1.90	2.39	2.88
3¾	1.35	1.48	1.60	2.05	2.57	3.08
4	1.40	1.55	1.70	2.20	2.74	3.27
4¼	1.50	1.65	1.80	2.35	2.91	3.46
4½	1.60	1.75	1.90	2.50	3.08	3.65
4¾	1.70	1.85	2.00	2.60	3.23	3.85
5	1.98	2.15	2.31	2.97	3.71	4.44
5½	2.20	2.37	2.53	3.31	4.09	4.86
6	2.42	2.59	2.75	3.60	4.44	5.28

Brake Lining Display Stand

On orders for 300 feet or more we will furnish without charge, on request, a display stand that will help sell brake lining.

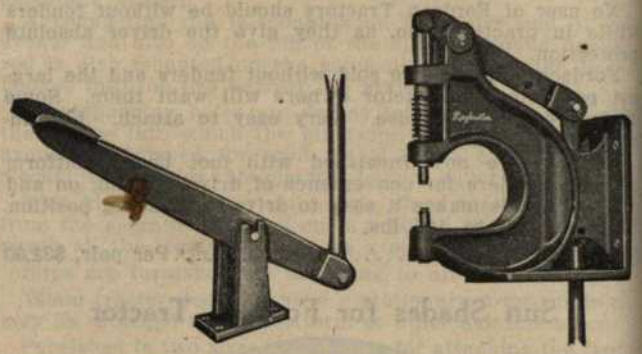
For Brake Lining Rivets refer to Index.

Raybestos Sign of Service

The Raybestos Sign of Service indicates to the passing motorist or the regular customer the fact that the garage displaying it is of the better sort, one which need not be ashamed of its work, because it is done right. In other words, the garage with the Raybestos Sign benefits through the excellent reputation for leadership, quality and dependability that Raybestos has built up since it originated and introduced the first asbestos brake lining ever made, seventeen years ago.

Ask for Special Service Station Proposition.

Raybestos Riveting Machine



The Raybestos Riveting Machine is an improvement over existing types of foot power riveters for use with tubular rivets only, especially designed for use in automotive work. Makes it easy to handle difficult jobs where the work has to be held with both hands while the rivet is headed by foot pressure on the treadle. It works equally well on brake bands and clutch discs. When used with the proper length tubular rivets and the correct spindle or header it does a perfect job with precision and dispatch. It is extremely simple in operation and it is easy for even an inexperienced man to do good work. There is practically no part to get out of order. May be fastened to wall or bench.

Included with machine are the necessary tools to perform any job of punching out old rivets and heading new ones. Weight 125 lbs.

No. 36978.....Each, $40.00

Raybestos Attaching Kit

Raybestos Attaching Kit saves time wherever brakes are relined. Contains all tools needed except hammer, vise and hand drill. A kit on every bench where brakes are relined will save many dollars. Includes drill, tubular rivet countersink, flat countersink, anvil, hollow rivet set, tubular rivet set and an assortment of tubular, split and solid rivets most frequently used.

Put up in steel box with compartments for various tools.

No. B31.....Each, $6.00

Rayco Transmission Lining Sets

A woven cotton material that is treated to withstand heat and produces very smooth action. Put up in sets complete, boxed, consisting of three pieces of lining 1⅛ inches wide, 3/32 inch thick, 23½ inches long, with necessary rivets for attaching.

No. R15—Rayco Transmission Lining Sets.....Each, 1.20

Chatterless Transmission Lining Sets

Chatterless Transmission Brake Lining for the Ford car is a very satisfactory Transmission Lining that eliminates the chatter and gives excellent wear.

Put up in sets, complete, boxed, consisting of three pieces of lining 1⅛ inches wide, 3/32 inch thick and 23½ inches long, with the necessary rivets for attaching.

No. C13—Chatterless Transmission Lining Sets..Each, 1.25

"Scandinavia" Transmission Lining Sets

Made especially for Ford use. The hot oily condition of the planetary transmission cannot harm it. It will not chatter or glaze. Wearproof, made of the best long staple cotton interwoven into a compact fabric, especially impregnated, processed and hardened to resist heat, oil and grit.

Weighs 25 to 35 per cent more than other brake linings. This means that Scandinavia contains more yarn, more body and more actual value. It is made to last and outlast.

Scandinavia is put up in boxes containing 3 pieces of proper length with the necessary solid brass rivets for fastening to the brake band.

No. 91—"Scandinavia" Transmission Lining Sets. Each, 2.25

Plain White Transmission Lining

Plain white woven lining, same as used as regular equipment on Fords. Cut in strips of the proper length for Ford transmission. Rivets not included.

No. F1.....Per doz. strips, $3.60

Thermoid Brake Lining

Just the same inside as outside. Therefore has a dependable uniform gripping power until worn paper-thin.

Constructed of long staple Canadian asbestos, reinforced and interwoven with solid brass wire. Under giant heated rolls it is impregnated with grapnal, a secret friction compound which is forced through every pore. This exclusive process guarantees resistance to moisture, oil and gasoline. It is then folded and stitched, after which every square inch is hydraulic compressed, at a pressure of 2000 pounds, for one hour.

Guarantee: Thermoid Brake Lining is guaranteed to be 100 per cent brake lining, to have a more uniform friction or gripping power and to outwear and give more satisfactory results than any other brake lining manufactured. Not affected by heat, oil, grease, water, gasoline or dirt.

Put up approximately 50 ft. in a roll.

On orders for 300 feet or more the factory will furnish an attractive metal display stand.

Width Inches	List per foot Thickness 1/8-in.	3/32-in.	1/16-in.	1/4-in.	5/32-in.	3/8-in.
1	.40	.45	.50	.70	.83	.96
1⅛	.45	.50	.55	.75	.92	1.06
1¼	.50	.55	.60	.80	.98	1.16
1½	.60	.65	.70	.90	1.13	1.35
1¾	.70	.75	.80	1.00	1.27	1.54
2	.80	.85	.90	1.20	1.47	1.73
2¼	.90	.95	1.00	1.30	1.62	1.93
2½	1.00	1.05	1.10	1.50	1.81	2.12
2¾	1.10	1.15	1.20	1.60	1.96	2.31
3	1.20	1.25	1.30	1.70	2.10	2.50
3¼	1.25	1.33	1.40	1.80	2.25	2.69
3½	1.30	1.40	1.50	1.90	2.39	2.88
3¾	1.35	1.48	1.60	2.05	2.57	3.08
4	1.40	1.55	1.70	2.20	2.74	3.27
4½	1.60	1.75	1.90	2.50	3.08	3.65
5	1.80	1.95	2.10	2.70	3.37	4.04
5½	2.00	2.15	2.30	3.01	3.72	4.42
6	2.20	2.35	2.50	3.27	4.04	4.80

Raybestos Brake Lining Cutter

This Lining Cutter eliminates the disagreeable part of selling brake lining. It is far superior and more efficient than tinners' snips or hack saws.

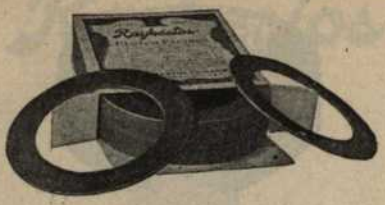
The cutting blade is 3½ inches wide and will easily and quickly permit cutting any size brake lining up to and including ⅛ inch thick.

In having this cutter equipped with a handle 15 inches long, the leverage permits cutting straight and even with practically no exertion.

Cutting blade can be removed for sharpening when necessary. Takes but very little room and will prove a time saver. Weight 17 lbs.

Brake Lining Cutter.....Each, 15.00

Raybestos Molded Clutch Facings



The Raybestos Molded Disc Clutch Facing (patented) is an improved Facing composed of pure asbestos with a suitable binder, molded under pressure, insuring absolutely homogeneity and accuracy quite impossible with the woven type of Facing which was composed of asbestos spun around a composition wire (the wire to give the required tensile strength), this in turn woven into tape, subsequently formed into a ring. One advantage of the Raybestos Molded Facing is that it can be made endless, which is not practicable in the manufacture of woven Facings heretofore used by clutch builders and users.

Raybestos Molded Clutch Facings are definitely guaranteed. Should the facings break or fail to stand up, the Raybestos Company agrees to replace them free of charge and allow not to exceed 8 hours' labor costs, for taking down and reassembling clutch if due to facing trouble. This guarantee covers six months' service on passenger cars and light trucks, extending from date of installation, or purchase of new car. If Raybestos Molded Clutch Facings do not substantiate this claim, return Facings to the Raybestos Company, together with repair bill for labor (not exceeding 8 hours) and check will be promptly mailed. Packed one set in a box with necessary rivets.

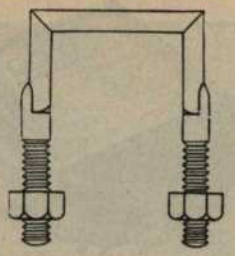
	List Price Per Ring
Reo, 6⅝x5⅛x⅛-inch	.44
Buick, 7⅝x5⅞x$\frac{5}{32}$-inch	.53
Cadillac, 7¾x5¾x$\frac{3}{64}$-inch	.70
Saxon, 7⅞x5⅝x⅛-inch	.87
Fuller, 8x6x$\frac{5}{32}$-inch	.67
Fuller, 8x6x⅛-inch	.63
Packard, 8x6x$\frac{11}{64}$-inch	.82
Brown & Lipe, 8$\frac{7}{16}$x6¼x$\frac{5}{32}$-inch	.86
Dodge, 9x6¾x⅛-inch	.76
Chalmers, 9x7$\frac{11}{32}$x$\frac{5}{32}$-inch	.67
Borg & Beck, 9⅞x6⅞x⅛-inch	1.13
Borg & Beck, 11⅞x8⅜x⅛-inch	1.62
Borg & Beck, 7⅞x5⅜x⅛-inch	.87
Hupmobile, 9⅝x7⅜x⅛-inch	.83
Studebaker Big Six, 12x8¼x$\frac{5}{16}$-inch	1.84
Studebaker Little Six, 10x7½x$\frac{5}{32}$-inch	.97
	Per Set
Durant, 8⅝x6$\frac{11}{16}$x⅛-inch	1.86
Star, 10x8x$\frac{5}{32}$-inch	1.37

Hood Lacing

A fabric lacing of exceptional strength. Treated with a preparation which makes it fireproof and also prevents it from becoming filled with dirt or grease. May be either laced in or riveted. Put up 100 ft. in a roll.

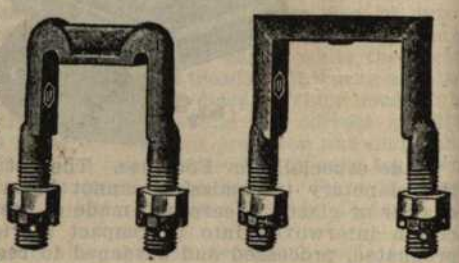
¼-inch	Per 100 ft.,	$ 4.50
⅜-inch	Per 100 ft.,	$ 5.20
½-inch	Per 100 ft.,	$ 6.00
¾-inch	Per 100 ft.,	$ 9.00
1-inch	Per 100 ft.,	$10.50

Automobile Spring Clips



No.	For Spring, in.	No. of Leaves	Flat part, in.	Width, in.	Shank, in.	Per 100
21D	1½	4	1	⅞	⅜x1½	29.00
22B	1½	4	1	⅞	$\frac{7}{16}$x2	35.00
22C	1½	5	1$\frac{1}{16}$	¾	$\frac{7}{16}$x1¼	34.50
32S	1¾	6	1¾	⅞	$\frac{7}{16}$x1½	37.50
32B	1¾	3	$\frac{13}{16}$	¾	$\frac{7}{16}$x1½	36.00
32Y	1¾	8	2½	⅞	$\frac{7}{16}$x2	40.00
32U	1¾	6	1$\frac{13}{16}$	⅞	$\frac{7}{16}$x2$\frac{1}{16}$	39.50
32R	1¾	5	1⅝	⅞	$\frac{7}{16}$x2	38.50
32P	1¾	5	1⅝	⅞	$\frac{7}{16}$x1½	37.50
32J	1¾	5	1$\frac{1}{16}$	⅞	$\frac{7}{16}$x1½	37.00
32DD	1¾	4	1$\frac{1}{16}$	⅞	$\frac{7}{16}$x1½	36.50
32EE	1¾	4	1$\frac{1}{16}$	⅞	$\frac{7}{16}$x1½	36.50
32H	1¾	4	1$\frac{1}{16}$	⅞	$\frac{7}{16}$x2	37.50
42R	2	6	2¼	⅞	$\frac{7}{16}$x2	41.50
42O	2	5	1$\frac{13}{16}$	⅞	$\frac{7}{16}$x2	40.50
42W	2	7	2¾	⅞	$\frac{7}{16}$x1⅝	42.00
42M	2	5	1$\frac{13}{16}$	⅞	$\frac{7}{16}$x1½	39.50
42U	2	7	2½	⅞	$\frac{7}{16}$x1½	41.00
42K	2	4	1½	⅞	$\frac{7}{16}$x1½	39.00
42F	2	3	1$\frac{1}{16}$	⅞	$\frac{7}{16}$x1½	38.50
43F	2	5	2	⅞	½x2	46.60
52E	2¼	4	1¾	⅞	$\frac{7}{16}$x1¾	42.00
52G	2¼	5	2	⅞	$\frac{7}{16}$x2	43.00
53E	2¼	4	1¾	⅞	½x2	48.00
55C	2¼	7	2⅛	1	⅝x4⅝	79.00
63E	2½	7	2¼	⅞	½x2¾	56.00
65C	2½	6	2	1	⅝x2½	83.00
65F	2½	11	3½	$\frac{13}{16}$	⅝x2	87.00

Spring Clips for Ford



These Spring Clips are not needed for Titanic Springs Nos. 102 and 111 on later model Fords which have the single attachment clip. These springs come with special castings making possible their installation without difficulty and not requiring additional parts.

Standard Size Front or Rear.....Per 100, 62.50

Extra Long Front for Heavy Duty Springs, required for installing nine plate front Ford springs on cars previous to 1921 which have double spring clips. Not necessary for later models having single spring clip.....Per 100, 70.00

Extra Long Rear for Heavy Duty Springs, required for installing rear Ford springs which have more than the standard eight plates.....Per 100, 70.00

Shackle Bolts

Made with hexagon head drilled and tapped for either oil or grease cups. With castled nut.

No.	Diam.	Lgth.	Each	No.	Diam.	Lgth.	Each
110A	½ in.	3½ ins.	$0.70	110E	⅝ in.	3¾ ins.	$0.90
110B	½ in.	4 ins.	$0.70	110F	⅝ in.	4¼ ins.	$0.90
110C	⅝ in.	3½ ins.	$0.80	110G	¾ in.	4½ ins.	$1.20
110D	⅝ in.	4 ins.	$0.80	110H	¾ in.	5¼ ins.	$1.20

Tuthill Replacement Springs

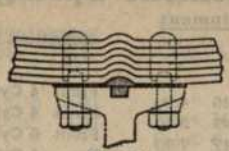


Fig. 1

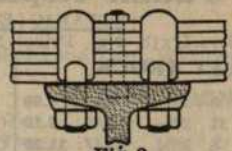


Fig. 2

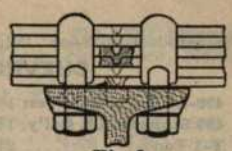


Fig. 3

We can furnish two grades of Springs to fit practically any make of car or truck. The Titanic is made with hump center as shown in Fig. 1. This makes a center bolt unnecessary and lessens the danger of Springs breaking in the center. Some Titanic Rear Springs do not have the hump center because of the peculiar shape of the Spring and in such cases the regular factory equipment style is used as shown in either Fig. 2 or 3. Such items are preceded by * in the list.

All Titanic Springs are made of high grade alloy steel and carry a very strong guarantee. Equipment Springs are made of the very best quality of carbon steel and are equal to the original equipment on the car. They are made to correspond exactly with the original equipment Springs in style of center, eyes, etc.

The columns headed "Titanic" represent the numbers and lists on Titanic Springs and the column headed "Equipment" should be used in ordering the Equipment grade of Springs. Items marked + indicate the Spring is equipped with rebound or other special leaves which are in addition to number of leaves shown.

Locat'n	Model and Year	Wid.	Lvs.	L'gth	TITANIC No.	TITANIC Price	Equipment No.	Equipment Price
BUICK								
Front	10-24-25-32-33-34-35-36	1½	6	36¾	B200	5.75	B5200	3.80
Front	26-27	1½	7	36⅝	B202	6.00	B5202	4.00
Front	16-17	2	7	39⅜	B207	9.00	B5207	6.00
Front	19-21	2	6	37¼	B214	7.20	B5214	4.80
Front	28-29	2	6	36⅝	B219	6.90	B5219	4.60
Front	30-31	2	7	36⅝	B221	8.40	B5221	5.60
Front	38-39-43	2	7	39	B208	8.70	B5208	5.80
Front	40	2	7	36¾	B225	7.80	B5225	5.20
Front	B24-25, C24-25 1914-15	2	6	36½	B227	7.50	B5227	4.80
Front	B36-37, C36-37 1914-15	2	7	38	B230	8.85	B5230	5.60
Front	B55 1914	2¼	7	40¾	B233	10.20	B5233	6.80
Front	C55-D55 1915-16	2¼	7	40¾	B256	12.00	B5256	7.60
Front	D44-D46 1916-17	2	11	36½	B258	9.75	B5258	6.40
Front	D45-D47 1916-17	2	8	36¼	260	8.55	5260	5.70
Front	D54 1916-17	2¼	13	40¾	B262	15.60	B5262	10.40
Front	D34-35, E34-35 1916-18	1¾	7	34½	266	6.00	5266	4.00
Front	E, H & K 44-45-46-47 1918-20	2	10	36½	275	10.35	5275	6.90
Front	E, H & K 49-50 1918-20	2	13	36½	279	11.25	5279	7.50
Front	21 & 22-44, 45 1921-22	2	10	36¾	281	10.50	5281	7.00
Front	21-47, 22-47 1921-22	2	11	36½	282	9.45	5282	6.30
Front	21 & 22-46, 48, 49, 50 1921-22	2	13	36⅝	283	11.10	5283	7.40
Front	22-34, 35, 36, 37 1922	1¾	7	36¾	284	6.30	5284	4.20
Front	All 4 Cyl. 23 Ser. 1923	1¾	12	36½	B288	9.45	B5288	6.30
Front	23-6-41, 47, 48, 49, 50,55 1923	2	11	37	B293	9.60	B5293	6.40
Front	23-6-44, 45, 54 1923	2	12	37	B294	10.50	B5294	7.00
L.Rear	10-32-34-36	1¾	4	39¼	B203	4.80	B5203	3.20
L.Rear	26-27-33-35	1¾	6	39¼	B205	6.30	B5205	4.20
L.Rear	28-29	2	6	41¼	B220	7.80	B5220	5.20
L.Rear	30-31	2	7	41¼	B222	8.70	B5222	5.80
L.Rear	40	2	7	42¼	B226	8.70	B5226	5.80
L.Rear	C24 1915	2	6	47⅛	B247	8.70	B5247	5.80
L.Rear	C25 1915	2	7	47¾	B249	9.60	B5249	6.40
L.Rear	C36 1915	2¼	7	47	B252	9.60	B5252	6.40
L.Rear	C37 1915	2¼	7	47⅞	B254	12.45	B5254	8.00
Rear	C55-D55 1915-16	3	8	49¾	*B257	25.20	B5257	16.80
Rear	D44-D46 1916-17	2½	10	45⅞	*B259	18.00	B5259	12.00
Rear	D35 1916-17	2	7	49⅛	*B267	10.25	B5267	6.80
Rear	D45-D47-E45 1916-18	2½	8	46	*261	17.85	5261	11.90
Rear	D54 1916	3	8	49⅞	*B263	21.90	B5263	14.60
Rear	D34 1916-17	2	5	48⅝	*B268	8.10	B5268	5.40
Rear	E34 1918	2	6	52¾	*B274	9.90	B5274	6.60
Rear	E35 1918	2	8	52¾	*B273	12.00	B5273	8.00
Rear	E44 1918	2½	10	46⅛	*B272	18.90	B5272	12.60
Rear	E49-E50 1918	2½	11	46	*B271	22.20	B5271	14.80
Rear	H44-46, K44-46, 21 & 22-44, 46, 47, 48 1919-22	2½	11	48	*B276	19.95	B5276	13.30
Rear	H & K45, 21 & 22-45 1919-22	2½	12	48	*B277	22.05	B5277	14.70
Rear	H47-K47 1919-20	2½	12	48	*B278	22.05	B5278	14.70
Rear	H49-50, K49-50, 21 & 22-49, 50 1919-22	2½	14	48	*B280	25.80	B5280	17.20
Rear	22-35 1922	2	8	55½	*285	13.95	5285	9.30
Rear	22-34, 22-36 1922	2	7	55¾	*B286	12.15	B5286	8.10
Rear	22-37 1922	2	9	55½	*B287	15.15	B5287	10.10
Rear	23-4-34, 36 1923	2	8	54¾	*B289	10.80	B5289	7.20
Rear	23-4-35 1923	2	7	54¾	*B290	11.25	B5290	7.50
Rear	23-4-37 1923	2	7	54¾	*B291	10.95	B5291	7.30
Rear	23-4-38 1923	2	7	54¾	*B292	11.25	B5292	7.50
Rear	23-6-44 1923	2½	7	48⅛	*B295	12.45	B5295	4.30
Rear	23-6-41, 48 1923	2½	8	48⅛	*B296	14.25	B5296	9.50
Rear	23-6-45 1923	2½	8	48⅛	*B297	14.40	B5297	9.60
Rear	23-6-50 1923	2½	10	48⅛	*B298	16.80	B5298	11.20
Rear	23-6-47, 55 1923	2½	10	48⅛	*B299	16.95	B5299	11.30
Rear	23-6-49, 54 1923	2½	11	48⅛	*B201	19.20	B5201	12.80
CADILLAC								
R.Frt.	30 1912-14	2	10	36½	C315	10.80	C5315	7.20
L. Frt.	30 1912-13	2	9	36½	C323	9.60	C5323	6.40
Front	51-53 1915-16	2	9	42⅛	C324	13.85	C5324	8.40
Front	55-57-59 1917-21	2	9	42¼	331	12.95	5331	7.80
R. Frt.	61 1922-23	2	9	42½	C338	13.25	C5338	8.00
L. Frt.	61 1922-23	2	9	42½	C339	13.25	C5339	8.00
Rear	55-57-59,2 Pas. 1917-21	2	9	53⅞	C332	14.15	C5332	8.60
Rear	55-57-59,5 Pas. 1917-21	2	9	54¼	C333	16.55	C5333	9.80
Rear	55-57-59,7 Pas. 1917-21	2	12	54	C334	17.75	C5334	11.10
R.Rear	61 P-R-C-4C-V 1922-23	2	9	54⅛	C340	15.35	C5340	9.40
L.Rear	61 P-R-C-4C-V 1922-23	2	9	54⅛	C341	15.35	C5341	9.40
R.Rear	61 7P-SD-SB-L-I-TB 1922-23	2	12	54⅛	C343	16.70	C5343	10.30
L.Rear	61 7P-SD-SB-L-I-TB 1922-23	2	12	54⅛	C344	16.55	C5344	10.20
Cross	55-57-59,5 Pas. 1917-21	2	7	39¾	*C336	8.40	C5336	5.60
Cross	55-57-59,7 Pas. 1917-21	2	10	39½	*C337	10.80	C5337	7.20
Cross	61 P-R-C-4C-V 1922-23	2	7	39¾	*C342	8.40	C5342	5.60
Cross	61 7P-SD-SB-L-I-TB 1922-23	2	10	39⅛	*C345	10.50	C5345	7.00
CHALMERS								
Front	24-29 1914-16	2	8	38⅝	C508	10.50	C5508	7.00
Front	26A-26B 1914-15	1¾	8	36½	C514	7.80	C5514	5.20
Front	32A-32B 1915-16	1¾	7	38⅛	C520	7.50	C5520	5.00
Front	35A, 6-30 1916	1¾	7	38⅜	C523	7.20	C5523	4.80
Front	35B, 35C, 6-30 1917-22	1¾	7	38⅝	525	7.50	5525	5.00
Front	35C All Models 1923	2	9	38⅛	C526	9.00	C5526	6.00
L.Rear	24-29 1914-16	2¼	9	52¼	*C509	15.60	C5509	10.40
L.Rear	26B 1915	2	7	48⅞	*C517	10.20	C5517	6.80
Rear	32B 1916	2	8	57	*C522	14.10	C5522	9.40
Rear	35A, 35B, 35C, 6-30 1916-22	2	7	54	*524	12.75	5524	8.50
Rear	35C Road. & Coupe 1923	2¼	9	56⅛	*C527	13.20	C5527	8.80
Rear	35C 5 Pas. Tour. & Sport 1923	2¼	11	56⅛	*C528	15.60	C5528	10.40
Rear	35C 7 Pas. Tour. & Coach 1923	2¼	13	56⅛	*C529	17.70	C5529	11.80
Rear	35C Sedan 1923	2¼	16	56⅛	*C530	21.90	C5530	14.60
CHEVROLET								
Front	H2-H4 1914-16	1¾	6	36½	C825	6.90	C5825	4.00
Front	490 1916	1¾	8	23	*C832	3.00	C5832	2.00
Front	H2-H4 1917	1¾	8	36½	C835	7.80	C5835	5.20
Front	490 1917-19	1¾	8	22⅝	*841	6.00	5841	4.00
Front	D-FA-FB 1918-22	2	8	36	837	8.10	5837	5.40
Front	490 1920-21	1¾	8+24		*842	5.70	5842	3.80
Front	490 1922	1¾	9+24		*846	6.00	5846	4.00
Front	490 Superior 1923	1¾	11	26½	*C849	8.10	C5849	5.40
L.Rear	H2 1914-16	1¾	6	48¼	C826	7.50	C5826	5.00
L.Rear	H4 1914-16	1¾	7	48⅛	C828	9.00	C5828	6.00
Rear	490 1916-19	2	9	31	*833	8.55	5833	5.70
Rear	FA-FB Road. 1918-22	2¼	8	35⅜	*C838	10.50	C5838	7.20
Rear	D-FA-FB Tour. & Coupe 1918-22	2¼	10	35¼	*839	12.75	5839	8.50
Rear	FB Sedan 1918-22	2¼	11	35¼	*C848	13.80	C5848	9.20
Rear	490 Roadster 1920-22	2	7+30¾		*C843	7.05	C5843	4.70
Rear	490 Touring & Coupe 1920-22	2	9+30¾		*844	8.85	5844	5.90
Rear	490 Sedan 1920-22	2	9+30¾		*847	9.30	5847	6.20
Rear	490 Superior Road., Coupe 1923	2	9	32¼	*C850	7.65	C5850	5.10
Rear	490 Superior Tour., Sedanette 1923	2	11	32⅜	*C851	9.30	C5851	6.20
Rear	490 Superior Sedan 1923	2	12	32½	*C852	9.75	C5852	6.50

Tuthill Replacement Springs—Continued

Locat'n	Model and Year	Wid.	Lvs.	L'gth	TITANIC No.	TITANIC Price	Equipment No.	Equipment Price
CHEVROLET TRUCK								
Front	490-Lt.Del'y, G-¾ Ton	1¾	9	+24	*846	6.00	5846	4.00
Front	490 Superior Lt. Del'y.	1¾	11	26½	*C849	8.10	C5849	5.40
Front	T-1 Ton	2¼	8	38¼	*C147	11.10	C5147	7.40
Rear	490-Lt. Del'y	2	9	+30¾	*847	9.30	5847	6.20
Rear	490 Superior Lt. Del'y.	2	9	32¾	*C103	10.35	C5103	6.90
Rear	G-¾ Ton	2½	10	44	*C7	19.20	C5007	12.80
Rear	T-1 Ton	2½	12	54⅛	*C148	28.20	C5148	18.80
CLEVELAND								
Front	40-41 1919-22	2	9	38	C3800	10.35	C8800	6.90
Front	41 1923-24	2	9	38½	C3804	9.60	C8804	6.40
Rear	40-41 Road. & Coupe 1919-22	2	7	52	*C3802	11.40	C8802	7.60
Rear	40-41 Touring 1919-22	2	7	52	*C3801	11.55	C8801	7.70
Rear	40-41 Sedan 1919-22	2	7	52¼	*C3803	12.60	C8803	8.40
Rear	41 Roadster 1923-24	2	7	53	*C3805	10.80	C8805	7.20
Rear	41 Coupe 1923-24	2	7	53	*C3806	10.80	C8806	7.20
Rear	41 Touring 1923-24	2	7	53	*C3807	11.10	C8807	7.40
Rear	41 Sedan 1923-24	2	7	53¼	*C3808	12.60	C8808	8.40
COLE								
Front	860 1916-17	2¼	8	39½	C134	11.40	C5134	7.60
Front	870-890 1918-24	2¼	8	39¼	C149	11.40	C5149	7.60
Rear	870-890 1918-24	2¼	10	57¾	*C150	17.40	C5150	11.60
COLUMBIA								
Front	Big Six 1917-21	1¾	9	38	C155	8.70	C5155	5.80
Front	Big Six 1922-23	1¾	9	38⅛	C199	9.00	C5199	6.00
Front	Light Six 1st Series 1922	1¾	8	38¼	C209	8.70	C5209	5.60
Front	Light Six 2nd Series 1922-23	1¾	8	39	C206	8.40	C5206	5.60
Rear	Big Six Ex. Sedan 1917-23	2¼	11	48⅛	*C156	22.50	C5156	15.00
Rear	Big Six Sedan 1917-23	2¼	12	48⅛	*C210	23.40	C5210	15.60
Rear	Light Six Ex. Sedan 1922-23	2	8	52⅛	*C207	11.10	C5207	7.40
Rear	Light Six Sedan 1922-23	2	9	52⅛	*C208	12.60	C5208	8.40
DAVIS								
Front	H-52-53-54-55 1917-20	2	8	38¼	D62	9.00	D5062	6.00
Front	51-56-61-65 1921-22	2	7	38⅛	D155	9.00	D5155	6.00
Front	71 1922	2	8	35	D156	8.10	D5156	5.40
Rear	H 1917-19	2¼	9	55¾	*D63	19.20	D5063	12.80
Rear	51-53-61-63 1921-22	2¼	7	57⅛	*D59	15.00	D5059	10.00
Rear	71 1922	2	9	52	*D157	13.50	D5157	9.00
DODGE								
Front	All Models 1915-22	1¾	6	36¼	1150	5.70	6150	3.80
Front	Roadster 1923	1¾	7	36¾	D1160	6.00	D6160	4.00
Front	Tour. & Coupe 1923	1¾	8	36¾	D1162	6.30	D6162	4.20
Front	Sedan 1923	1¾	9	36¾	D1164	6.90	D6164	4.60
L.Rear	Touring 1915-20	2	7	43	1151	8.85	6151	5.90
L.Rear	Road. & Coupe 1915-20	2	6	43	D1157	7.35	D6157	4.90
L.Rear	Sedan 1915-20	2	8	43⅛	D1158	9.60	D6158	6.40
U.Rear	Tour., Road., Coupe 1915-20	2	5	24⅛	*1152	3.30	6152	2.20
U.Rear	Sedan 1915-20	2	6	24⅛	*D1159	3.75	D6159	2.50
L.Rear	Touring 1921-22	2	7	45⅛	1153	8.70	6153	5.80
L.Rear	Road. & Coupe 1921-22	2	6	45⅛	1155	7.95	6155	5.30
L.Rear	Sedan 1921-22	2	8	45¼	1156	9.75	6156	6.50
L.Rear	Roadster 1923	2	7	45⅛	D1161	7.95	D6161	5.30
L.Rear	Tour. & Coupe 1923	2	8	45⅛	D1163	8.55	D6163	5.70
L.Rear	Sedan 1923	2	10	45⅛	D1165	10.50	D6165	7.00
U.Rear	All Models 1921-23	2	5	26	*D1154	3.90	D6154	2.60
DODGE TRUCK								
Front	Commercial 1917-23	1¾	7	36⅛	1175	6.45	6175	4.30
L.Rear	Commercial 1917-23	2	9	43⅛	1176	10.80	6176	7.20
U.Rear	Commercial 1917-23	2	6	24¼	*D1177	4.20	D6177	2.80
DORT								
Front	5 1916	2	6	36⅞	D1450	7.80	D6450	5.20
Front	All Models 1917-20	2	7	37½	1452	8.40	6452	5.60
Front	All 4 Cyl. Models 1921-23	2	7	37½	1454	8.40	6454	5.60
Front	All 6 Cyl. Models 1923	2	8	37¾	D1458	9.00	D6458	6.00
Rear	5-5S-6-9-11-15 1917-20	2	7	+49	D1451	13.65	D6451	9.10
Rear	10 1920	2	6	+49	D1453	12.00	D6453	8.00
Rear	Tour. & Coupe 4 & 6 Cyl. 1921-23	2	7	+50¾	1456	13.65	6456	9.10
Rear	Roadster 4 & 6 Cyl. 1921-23	2	7	+50¾	D1455	13.05	D6455	8.70
Rear	Sedan 4&6 Cyl. 1921-23	2	8	+50¾	D1457	15.60	D6457	10.40
DURANT								
Front	4 Cyl. 1922	2	5	34	4000	5.70	9000	3.80
Front	4 Cyl. 1922-23	2	6	34¼	D4085	6.45	D9005	4.30
Front	6 Cyl. 1922-23	2	8	36¾	4002	9.00	9002	6.00
Rear	4 Cyl.Ex.Sedan 1922-23	2	7	49½	*4001	10.50	9001	7.00
Rear	6 Cyl. Touring 1922-23	2¼	10	56⅜	4003	18.30	9003	12.20
Rear	6 Cyl. Sedan 1922-23	2¼	11	56⅜	D4004	20.40	D9004	12.60
ELCAR								
Front	D-E-F-G 1917	1¾	7	34¾	E37	6.90	E5037	4.60
Front	D-H-G 1918-19	2	7	35¼	E38	8.40	E5038	5.60
Front	E51 1920-21	2	7	+35⅝	*E26	8.55	E5026	5.70
Rear	D-H-G 1918-19	2	8	51½	*E39	13.20	E5039	8.80
Rear	E51 1920-22	2½	7	52	*E27	14.10	E5027	9.40
ELGIN								
Front	6 Cyl. 1916	1¾	6	34½	E3300	5.70	E8300	3.80
Front	6 Cyl. 1917-18	1¾	7	34⅜	E3310	6.30	E8310	4.20
Front	H 1919	2	6	36¾	E3304	7.50	E8304	5.00
Front	K-K1-H 1920-22	2	7	36⅞	E3306	6.30	E8306	4.20
Rear	6 Cyl. 1916	2¼	7	46	*E3301	13.50	E8301	9.00
Rear	6 Cyl. 1917	2¼	6	46⅜	*E3303	12.00	E8303	8.00
Rear	6 Cyl. 1918	2¼	8	46	E3305	14.40	E8305	9.60
Rear	H 1919	2¼	8	47	E3307	15.00	E8307	10.00
Rear	K-K1 Tour. & Scout 1920-22	2¼	8	+49⅝	*E3308	15.60	E8308	10.40
Rear	K-K1 Sedan 1920-22	2¼	9	+49⅝	*E3309	17.10	E8309	11.40
ESSEX								
Front	B 1918	2	5	36	E3700	7.20	E8700	4.80
Front	A 1919-23	2	6	36	3702	6.60	8702	4.40
Rear	B 1918	2	7	54¼	*E3701	13.20	E8701	8.80
Rear	A Roadster 1919-23	2	7	54¼	*E3704	11.70	E8704	7.80
Rear	A Tour.&Sedan 1919-23	2	8	54¼	*3703	12.75	8703	8.50
FORD FRONT (Including Truck Springs)								
Front	Pass. Cars All Years	1½	7	33½	102	6.00	100	.....
Front	Trucks, Delivery Cars, Taxis, etc., All Years	1½	9	33½	111	7.00	5108	4.20
FORD REAR (Including Truck Springs)								
Rear	Touring, Roadster, Coupe.... All Years	2	8	50¾	*105	12.00	5105	.....
Rear	Sedan All Years	2	9	50¾	*115	15.45	5115	10.30
Rear	Delivery Cars, Taxis, etc., All Years	2	10	50¾	*113	17.00	5113	11.40
Rear	1 Ton Truck All Years	3	9	18	*114	8.10	5114	5.40
GARDNER								
Front	G-T-R-S 1919-24	1¾	6	+35⅛	G89	6.60	G5089	4.40
Rear	G Ex. Sedan 1919-21	1¾	8	51	*G90	10.50	G5090	7.00
Rear	T-R-S 1922-23	1¾	10	51⅜	*G120	12.75	G5120	8.50
G. M. C. TRUCK								
Front	15-¾ Ton	2	7	+36¾	G41	9.60	G5041	6.40
Front	16-¾ Ton	2¼	8	38⅛	*G77	11.40	G5077	7.60
Front	K15-K16-¾ Ton	2¼	9	38⅛	*G113	12.90	G5113	8.60
Front	21-1 Ton	2½	7	36⅛	*G64	11.10	G5064	7.40
Front	31-1½ Ton	2½	8	36⅛	*G43	11.40	G5043	7.60
Front	41-2 Ton	2½	8	40⅝	G45	13.20	G5045	8.80
Front	K41-2 Ton	2½	9	40¾	*G114	15.90	G5114	10.60
Front	71-101-3½-5 Ton	3	10	44⅛	*G47	24.90	G5047	16.60
Front	K71-K101-3½-5 Ton	3	10	44¼	*G116	25.80	G5116	17.20
Rear	15-¾ Ton	2	16	42	*G42	21.00	G5042	14.00
Rear	16-¾ Ton	2½	10	+54	*G78	27.00	G5078	18.00
Rear	K15-K16-¾ Ton	2½	10	+54	*G119	27.60	G5119	18.40
Rear	21-1 Ton	3	10	54⅜	*G65	33.15	G5065	22.10
Rear	31-1½ Ton	3	10	+54¼	*G44	33.60	G5044	22.40
Rear	41-2 Ton	3	12	54⅜	*G46	42.00	G5046	28.00
Rear	K41-2 Ton	3	12	54½	*G115	42.00	G5115	28.00
Rear	71-3½ Ton	4	11	53¾	*G48	50.40	G5048	33.60
Rear	K71-3½ Ton	4	12	54¼	*G117	55.20	G5117	36.80
Rear	101-5 Ton	4	15	54	*G49	71.40	G5049	47.60
Rear	K101-5 Ton	4	16	54	*G118	72.90	G5118	48.60
GRANT								
Front	T-V-K 1915-17	1½	6	34⅜	2450	5.25	7450	3.50
Front	G-GX 1918-19	1¾	7	34⅞	G2452	7.00	G7452	4.60
Front	H Early 1920	2	7	38	G2454	9.65	G7454	5.60
Front	H 1920-22	2	8	38	2458	10.55	7458	6.20
Rear	T-V-K 1915-17	2	8	38¼	G2451	9.60	G7451	6.40
Rear	G-GX 1918-19	2	8	46¼	G2453	14.40	G7453	9.60
Rear	H Roadster 1920-22	2	7	56¼	G2456	12.60	G7456	8.40
Rear	H Touring & Coupe 1920-22	2	8	56¼	G2455	15.15	G7455	9.30
Rear	H Sedan 1920-22	2	9	56¼	G2457	14.70	G7457	9.80

Tuthill Replacement Springs—Continued

Locat'n	Model and Year	Wid.	Lvs.	L'gth	TITANIC No.	TITANIC Price	Equipment No.	Equipment Price
GRAY								
Front	**All Types** 1922-23	2	6	+22⅛	*G1250	4.50	G6250	3.00
Rear	**Roadster** 1922-23	2	4	30	*G1252	4.50	G6252	3.00
Rear	**All Types ex. Roadster** 1922-23	2	5	30	*G1251	5.25	G6251	3.50
HAYNES								
Front	**30-33-34-35** 1915-16	2	8	38⅛	H1102	9.00	H6102	6.00
Front	**36-37-38-40-41** 1917	2	8	38⅛	H1109	10.20	H6109	6.80
Front	**38-39-43-44** 1918	2¼	9	38⅞	H1113	12.60	H6113	8.40
Front	**45-46** 1919-20	2¼	8	39¼	H1117	11.40	H6117	7.60
Front	**47-48** 1920-21	2¼	8	39	H1122	10.95	H6122	7.30
Front	**50-55-57** 1921-23	2¼	6	34⅛	H1124	7.50	H6124	5.00
Front	**75-77** 1922-23	2¼	8	39	*H1126	10.95	H6126	7.30
Rear	**30** 1915	2	7	54½	*H1105	12.00	H6105	8.00
Rear	**34** 1916	2	7	54¼	*H1107	12.00	H6107	8.00
Rear	**35** 1916	2	8	54¼	*H1108	13.80	H6108	9.20
Rear	**36-38-40 Road.** 1917	2	7	54⅜	*H1110	11.70	H6110	7.80
Rear	**36-38-40 Tour.** 1917	2	8	54⅜	*H1111	13.50	H6111	9.00
Rear	**37-39-41** 1917	2	9	54½	*H1112	14.70	H6112	9.80
Rear	**39-44 Road.** 1918	2¼	7	58¾	*H1114	14.10	H6114	9.40
Rear	**38T-39C-43T-44C** 1918	2¼	8	58¾	*H1115	16.50	H6115	11.00
Rear	**39T-39S-39TC-44S-44T-44TC** 1918	2¼	9	58½	*H1116	18.30	H6116	12.20
Rear	**45-46 Road.** 1919-20	2¼	7	59	*H1118	14.10	H6118	9.40
Rear	**45-46 Tour.** 1919-20	2¼	8	58¾	*H1119	16.50	H6119	11.00
Rear	**45-46 5 Pass.** 1919-20	2¼	9	58¼	*H1120	17.40	H6120	11.60
Rear	**45-46 Sedan** 1919-20	2¼	11	58¾	*H1121	20.40	H6121	13.60
Rear	**47-48 7 Pass.** 1920-21	2¼	8	59½	*H1123	16.80	H6123	11.20
Rear	**50-55 Tour. & Coupe** 1921-22	2¼	8	54½	*H1125	14.25	H6125	9.50
Rear	**75-77 7 Pass. Touring** 1922-23	2¼	8	59½	*H1127	16.20	H6127	10.80
Rear	**75-77 7 Pass. Sedan** 1922-23	2¼	8	59½	*H1128	16.95	H6128	11.30
HUDSON								
Front	**6-40** 1914-15	2	8	38⅞	H610	9.90	H5610	6.60
Front	**6-54** 1914	2¼	8	39½	H612	12.00	H5612	8.00
Front	**6-40** 1916	2	9	39½	H626	10.80	H5626	7.20
Front	**Super-Six** 1916-18	2¼	9	39¼	H631	11.55	H5631	7.70
Front	**Series O Super-Six** 1919	2¼	7	39	H634	9.30	H5634	6.20
Front	**Series O Super-Six** 1920-22	2¼	8	39	637	9.45	5637	6.30
Front	**Series O Super-Six** 1923	2¼	10	39	H643	10.65	H5643	7.10
L.Rear	**6-40** 1914-15	2	8	54⅜	*H611	15.00	H5611	10.00
L.Rear	**6-40** 1916	2	11	54	*H627	16.20	H5627	10.80
Rear	**Super-Six Roadster & Cabriolet** 1916-17	2¼	6	57¾	*H632	12.60	H5632	8.40
Rear	**Super-Six Tour.** 1916-17	2¼	9	58	*H630	15.75	H5630	10.50
Rear	**Super-Six, Limo. & Sedan** 1916-18	2¼	9	57¾	*H638	16.20	H5638	10.80
Rear	**Super-Six Tour.** 1918	2¼	10	57¾	*H633	16.05	H5633	10.70
Rear	**Ser. O Super-Six Coupe, Speedster, Cabriolet** 1919-23	2¼	8	57¾	*H636	15.90	H5636	10.60
Rear	**Ser. O Super-Six Tour., Sedan, Limo.** 1919-23	2¼	8	57¾	*H642	16.20	H5642	10.80
Rear	**Ser. O Super-Six 4 Ps. & Coach** 1923	2¼	9	57¾	*H644	15.60	H5644	10.40
HUPMOBILE								
Front	**32** 1913-14	1¾	7	34⅜	H707	6.60	H5707	4.40
Front	**K-N** 1915-17	1¾	7	37	712	7.80	5712	5.20
Front	**NU** 1917	1¾	8	39¾	H717	8.70	H5717	5.80
Front	**R** 1918	1¾	5	36	H721	6.00	H5721	4.00
Front	**R** 1919-20	1¾	6	36¼	719	6.90	5719	4.60
Front	**R** 1921	1¾	6	36⅛	722	6.30	5722	4.20
Front	**R** 1922	1¾	7	36	H728	7.80	H5728	5.20
Front	**R Tr., Cp., Rd.** 1922-23	1¾	9	36⅜	724	8.25	5724	5.50
Front	**R Sedan** 1922-23	1¾	8	37⅜	H727	7.65	H5727	5.10
Rear	**32** 1914	2	8	47⅛	*H710	13.20	H5710	8.80
Rear	**32(Tipping Plate)** 1912-14	2	1	26¼	*H715	2.55	H5715	2.00
Rear	**K-N** 1915-17	2	7	52¾	*713	11.55	5713	7.70
Rear	**NU** 1917	2	9	60¾	*H718	16.80	H5718	10.60
Rear	**R** 1918-20	2	7	51¼	*720	11.40	5720	7.60
Rear	**R Tour., Coupe & Road.** 1920-21	2	7	51¼	*723	10.80	5723	7.20
Rear	**R Tour., Coupe & Road.** 1922-23	2	8	51⅜	*H726	11.40	H5726	7.50
Rear	**R Sedan** 1922-23	2	9	51⅜	*H729	12.60	H5729	8.40
INTERNATIONAL TRUCK								
Front	**H-¾ Ton**	2¼	8	41⅜	I-38	11.70	I-5038	7.80
Front	**S-¾ Ton**	2¼	7	38	*I-20	9.30	I-5020	6.20
Front	**F-1 Ton**	2¼	10	41	*I-56	13.80	I-5056	9.20
Front	**K-1½ Ton**	2¼	10	41	*I-51	14.40	I-5051	9.60
Front	**31-1½ Ton**	2¼	10	41½	*I-31	14.10	I-5031	9.40
Front	**G-2 Ton**	2½	9	41	*I-54	14.40	I-5054	9.60
Front	**41-2 Ton**	2½	9	41½	*I-33	16.80	I-5033	11.20
Front	**61-3 Ton**	2½	10	41	*I-62	16.80	I-5062	11.20
Rear	**H-¾ Ton**	2½	10	45	*I-39	16.20	I-5039	10.80
Rear	**S-¾ Ton**	2½	11	51	*I-21	21.00	I-5021	14.00
Rear	**F-1 Ton**	2½	12	44¾	*I-129	13.50	I-5129	13.00
Rear	**F-1 Ton**	2½	13	54¼	*I-57	31.20	I-5057	20.80
Rear	**K-1½ Ton**	3	14	56¼	*I-52	44.10	I-5052	29.40
Rear	**31-1½ Ton**	2½	13	54	*I-32	27.90	I-5032	18.60
Rear	**G-2 Ton**	3	12	56⅛	*I-55	41.40	I-5055	27.60
Rear	**61-3 Ton**	3	15	56¼	*I-63	48.60	I-5063	32.40
JEWETT								
Front	**All Models** 1922-24	2	8	36	*1950	7.95	6950	5.30
Rear	**Road., Tour., Coupe** 1922-24	2	8	54	*J1951	11.40	J6951	7.60
Rear	**Sedan** 1922-24	2	9	54	*J1952	13.20	J6952	8.80
JORDAN								
Front	**6-60-B-C-F** 1916-21	2¼	6	37¼	J29	9.30	J5029	6.20
Front	**M** 1920-21	2	6	37	J42	7.20	J5042	4.80
Front	**MX** 1922-24	2	6	36⅛	J53	7.20	J5053	4.80
Rear	**6-60** 1916-18	2¼	8	58	*J30	16.80	J5030	11.20
Rear	**B 4 Pass. Sport** 1916-17	2¼	7	58½	*J47	15.90	J5047	10.60
Rear	**B Touring** 1916-17	2¼	8	58½	*J48	16.50	J5048	11.00
Rear	**C Sport, Sport Marine** 1918	2¼	7	58½	*J44	15.00	J5044	10.00
Rear	**C Touring** 1918	2¼	8	58¾	*J45	16.50	J5045	11.00
Rear	**F Touring** 1919-21	2¼	8	58½	*J46	16.80	J5046	11.20
Rear	**M Roadster** 1920-21	2	7	56	*J49	12.00	J5049	8.00
Rear	**M Touring** 1920-21	2	8	56	*J43	12.60	J5043	8.40
Rear	**M Sedan** 1920-21	2	9	56	*J50	15.60	J5050	10.40
Rear	**MX Roadster** 1922-24	2	7	55⅞	*J54	12.00	J5054	8.00
Rear	**MX Touring** 1922-24	2	8	55⅞	*J55	13.50	J5055	9.00
Rear	**MX Sedan** 1922-24	2	9	55⅞	*J56	15.00	J5056	10.00
KELLY-SPRINGFIELD TRUCK								
Front	**K31-32-34, 1½ Ton**	2¼	10	+43½	K99	16.50	K5099	11.00
Front	**K35-36, 2½ Ton**	2¼	11	+43	*K115	16.80	K5115	11.20
Front	**K40-45-50-3½,4,5 Ton**	3	11	+51	*K116	31.20	K5116	20.80
Front	**K41, 3½ Ton**	3	11	48½	*K127	28.50	K5127	19.00
Front	**K60, 6 Ton**	3	12	+49¾	*K126	30.30	K5126	20.20
R.Rear	**K31, 1½ Ton**	2½	12	+45½	*K118	27.00	K5118	18.00
L.Rear	**K31, 1½ Ton**	2½	11	+45½	*K100	21.60	K5100	14.40
Rear	**K32-34, 1½ Ton**	2½	12	+51	*K119	32.10	K5119	21.40
Rear	**K35-36, 2½ Ton**	3	12	+51	*K120	34.50	K5120	23.00
R.Rear	**K40, 3½ Ton**	3	16	+57½	*K121	66.60	K5121	44.40
L.Rear	**K40, 3½ Ton**	3	15	+57½	*K117	61.50	K5117	41.00
Rear	**K41, 3½ Ton**	4	14	56¾	*K128	65.10	K5128	43.40
KISSEL								
Front	**6-38, 100 Pt. 6, CB6** 1917-20	2	7	36⅛	K78	8.40	K5078	5.60
Front	**Double Six** 1917-18	2	9	36⅛	K86	10.50	K5086	7.00
Front	**CB, 6-45 (After Cars No. 3000)** 1920-22	2	8	38	K124	10.20	K5124	6.80
L.Rear	**6-38, 100 Pt. 6** 1917-18	2¼	7	51⅜	*K79	12.00	K5079	8.00
L.Rear	**CB6** 1919	2¼	7	52⅜	*K97	12.90	K5097	8.60
Rear	**CB, 6-45 (After Cars No. 3000)** 1920-22	2¼	8	58	*K125	14.40	K5125	9.60
LEXINGTON								
Front	**6-0** 1916-17	2	7	34¼	L66	7.50	L5066	5.00
Front	**R** 1918-19	2	7	36⅝	L93	9.00	L5093	6.00
Front	**S-ST** 1920-21	2	6	32⅛	*L106	6.60	L5106	4.40
Front	**T6** 1921-22	2	7	34½	*L25	7.20	L5025	4.80
Front	**U All Models** 1923	2	10	38	*L1	10.50	L5001	7.00
Rear	**6-0** 1916-17	2	9	52⅜	*L118	13.50	L5118	9.00
Rear	**R** 1918-19	2¼	9	56½	*L94	16.50	L5094	11.00
Rear	**S-ST** 1920-21	2	8	52⅛	*L107	12.60	L5107	8.40
Rear	**T6** 1921-22	2	10	56	*L26	17.70	L5026	11.80
Rear	**U Roadster** 1923	2¼	11	59	*L2	17.70	L5002	11.80
Rear	**U Touring** 1923	2¼	11	59	*L3	17.70	L5003	11.80
Rear	**U Royal Coach** 1923	2¼	11	59	*L4	17.70	L5004	11.80
Rear	**U Sedan** 1923	2¼	13	59	*L5	20.70	L5005	13.80

Tuthill Replacement Springs—Continued

Locat'n	Model and Year	Wid.	Lvs.	L'gth	TITANIC No.	TITANIC Price	Equipment No.	Equipment Price
LIBERTY								
Front	10A-10B-10C-10D 1916-23	1¾	8	38½	3900	8.85	8900	5.90
Rear	10A-10B Tour. 1916-20	2	7	50⅞	*3901	10.35	8901	6.90
Rear	10C All Models, 10D Except Sedan 1921-23	2	7	51¼	*L3902	10.95	L8902	7.30
LINCOLN								
Front	All Models 1920-23	2¼	8	39½	*L108	11.70	L5108	7.80
Rear	Tour., Phae., Sdn., Town Car 1920-23	2½	8	60	*L109	19.20	L5109	12.80
Rear	Road., Coupe 1920-23	2½	7	60	*L116	17.70	L5116	11.80
Rear	Special Limo. 1920-23	2½	8	60	*L117	20.40	L5117	13.60
MACK								
Front	AB-1 Ton	2½	8	40½	*M202	14.10	M5202	9.40
Front	AB-1½-2 Ton	2½	9	40¾	*M204	15.00	M5204	10.00
Front	AB-2½ Ton	2½	9	40½	*M230	16.80	M5230	11.20
Front	AC-3½-5½-7½ Ton	3½	10	46¼	*M210	32.40	M5210	21.60
Rear	AB-1 Ton	3	8	48¼	*M203	23.10	M5203	15.40
Rear	AB-1½ Ton	3	9	48¼	*M205	26.40	M5205	17.60
Rear	AB-2 Ton	3	11	48¼	*M207	32.70	M5207	21.80
Rear	AB-2½ Ton	3	13	48¼	*M231	47.80	M5231	31.60
Rear	AC-3½ Ton	4	10	52¼	*M209	46.80	M5209	31.20
Rear	AC-5½ Ton	4	13	52	*M211	57.30	M5211	38.20
Rear	AC-7½ Ton (Open Body)	4	17	52¼	*M212	73.20	M5212	48.80
Rear	AC-7½ Ton (Dump Body)	4	17	52¼	*M208	73.20	M5208	48.80
MARMON								
Front	34 (With Spec. Bush's) 1916-22	2	9+39¼		*M149	18.20	M5149	14.00
Front	34 (Without Spec. Bush's) 1916-22	2	9+39¼		*M213	12.60	M5213	8.40
MAXWELL								
Front	25 1914-19	1¾	6	32½	1523	5.10	6523	3.40
Front	25 1920-21	2	6	32	1528	6.60	6528	4.40
Front	New Series 1922	2	6	36	1531	6.60	6531	4.40
Front	New Series 1923	2	8	36½	M1534	7.50	M6534	5.00
L.Rear	25 1914-16	1¾	6	40¼	M1524	6.90	M6524	4.60
L.Rear	25 1917	1¾	6	46¾	M1525	7.35	M6525	4.90
Rear	25 Tour. & Road. 1918-20	2	7	49	*1527	9.45	6527	6.30
Rear	25 Tour. & Road. 1921	2	7	49	*M1530	9.60	M6530	6.40
Rear	New Series All Except Sedan 1922	2	8	52	*1532	11.70	6532	7.80
Rear	New Series Sedan 1922 Touring 1923	2	10	53¼	*M1533	12.90	M6533	8.60
Rear	New Series Road. & Coupe 1923	2	9	53¼	*M1535	11.25	M6535	7.50
Rear	New Series Sedan 1923	2	11	53¼	*M1536	14.40	M6536	9.60
MAXWELL TRUCK								
Front	1-1½ Ton	2¼	7	38½	M1550	12.00	M6550	8.00
Rear	1 Ton	2¼	11	51⅝	*M1551	24.90	M6551	16.60
Rear	1½ Ton	2¼	12	51⅝	*M1552	26.10	M6552	17.40
MITCHELL								
Front	C-42, D-42, E-40, E-42, F-40, F-50 1916-23	2	8+40¾		*M220	11.10	M5220	7.40
Rear	C-42, C-48, D-40, F-40 1916-23	2½	9+45¾		*M219	19.50	M5219	13.00
Rear	C-42, D-42, E-42, F-42 1916-21	2½	10+48		*M221	22.50	M5221	15.00
Rear	E-40, F-40, F-50 1918-23	2½	11+45⅞		*M25	23.10	M5025	15.40
MONROE								
Front	M-2, M-3 1915-18	1½	5	36¾	M3400	4.50	M8400	3.00
Front	M-4 1917-18	1¾	6	32¼	M3403	6.00	M8403	4.00
Front	M-6, S-7, S-9, S-11, S-12 1918-22	1¾	6	34	M3404	6.30	M8404	4.20
L.Rear	M-2, M-3 1915-18	1½	6	45½	M3401	6.60	M8401	4.40
Rear	(Lower Cross) M-6, S-7, S-9, S-11, S-12 1918-22	2	10	46½	*M3406	15.75	M8406	10.50
Rear	(Upper Cross) M-6, S-7, S-9, S-11, S-12 1918-22	2	9	39⅞	*M3405	12.30	M8405	8.20
MOON								
Front	6-43 1916-17	2	7	39½	M181	9.00	M5181	6.00
Front	6-66 1916-17	2	7	39½	M183	8.40	M5183	5.60
Front	6-36, 6-45 1918-19	2	6	34½	M223	6.50	M5223	5.00
Front	6-46 Victory 1919-20	2	8	39	M228	9.60	M5228	6.40
Front	6-48 1920-21	2	9	38¾	M244	11.10	M5244	7.40
Front	6-68 1920-21	2	9	38¾	M246	11.40	M5246	7.60
Front	6-40 1922-23	2	7	36¼	*M78	7.50	M5078	5.00
Front	6-58 1923	2	8	39	*M272	9.60	M5272	6.40
Rear	6-43 1916	2	9	51⅜	*M182	13.50	M5182	9.00
Rear	6-43 1917	2	8	48⅝	*M227	13.20	M5227	8.80
Rear	6-66 1916-17	2	10	55	*M222	15.00	M5222	10.00
Rear	6-36, 6-45 1918-19	2	9	50¾	*M224	12.60	M5224	8.40
Rear	6-46 Victory 1919-20	2	8	53	*M229	14.10	M5229	9.40
Rear	6-48 1920-21	2	8	55¼	*M245	13.80	M5245	9.20
Rear	6-68 1920-21	2¼	10	55⅛	*M247	18.90	M5247	12.60
Rear	6-40 1922-23	2	8	54	*M79	12.90	M5079	8.60
Rear	6-58 Roadster 1923	2	10	54⅞	*M273	14.40	M5273	9.60
Rear	6-58 Touring 1923	2	11	54⅞	*M274	15.00	M5274	10.00
NASH								
Front	671 1917	2	8	38¼	N1001	10.20	N6001	6.80
Front	All 4 Cyl. Models 1920-23	2	7+37½		N1008	8.85	N6008	5.90
Front	All 6 Cyl. Models 1918-20	2	10	39¾	1003	11.70	6003	7.80
Front	All 6 Cyl. Models 1921-23	2	14+39¾		N1010	13.20	N6010	8 80
Rear	671 1917	2	9	53	*N1002	15.30	N6002	10.20
Rear	686 1918-21	2¼	10	56¼	*N1007	17.50	N6007	11.60
Rear	681-683-687 1918-21	2¼	10	56	*N1006	18.75	N6006	11.80
Rear	682-684-685 1918-21	2¼	11	56½	*N1004	20.55	N6004	12.60
Rear	41-42-43 (4 Cyl.) 1920-23	2	8+53⅝		*N1009	13.80	N6009	9.20
Rear	44 (4 Cyl.) 1920-23	2	9+53⅝		*N1014	15.00	N6014	10.00
Rear	686 Late Series, 696 1921-23	2¼	7+57		*N1011	15.00	N6011	10.00
Rear	681-685-687 Late Series, 691-695-697 1921-23	2¼	8+56½		*N1012	15.90	N6012	10.60
Rear	682-684 Late Series, 692-694 1921-23	2¼	9+56⅞		*N1013	18.30	N6013	12.20
NASH TRUCK								
Front	2017-3017, 1 & 2 Ton 1918-19	2¼	9	36¼	N34	12.00	N5034	8.00
Front	2018-3018, 1 & 2 Ton 1918-20	2¼	12	38	*N39	13.80	N5039	9.20
Front	2018-3018, 1 & 2 Ton 1921-22	2¼	10	38	*N13	13.50	N5013	9.00
Front	4017 (Quad) 1917-21	2½	9	49⅝	*N36	23.70	N5036	15.80
Rear	2017-2018, 1 Ton 1918-20	2½	12	52	*N35	27.00	N5035	18.00
Rear	2018 1921-22	2½	11	52	*N74	27.00	N5074	18.00
Rear	3017-3018, 2 Ton 1918-20	2½	12	52	*N37	35.40	N5037	23.60
Rear	3018 1921-22	2½	11	52	*N75	33.30	N5075	22.20
Rear	4017 (Quad) 1917-21	2½	8	49½	*N38	24.00	N5038	16.00
OAKLAND								
Front	37 (Overhung Spring) 1915	1¾	7	35¾	O947	6.90	O5947	4.60
Front	32 1916	1¾	8	31⅞	O933	6.00	O5933	4.00
Front	38 1916	1¾	7	35½	O936	6.90	O5936	4.60
Front	8-50 1916	2	9	40½	O940	12.30	O5940	8.20
Front	32B 1916	1¾	6	35	O939	6.60	O5939	3.90
Front	34, 34B 1917-19	1¾	6	35	943	6.60	5943	4.40
Front	34C, 34D, 6-44 1920-23	1¾	7	36½	949	6.75	5949	4.50
L.Rear	32 1916	1¾	7	40⅛	*O934	8.10	O5934	5.40
L.Rear	32B 1916	1¾	7	40½	*O945	8.10	O5945	5.60
Rear	34-34B Road. 1917-19	1¾	6	51	*948	8.85	5948	5.90
Rear	34-34B Tour. & Coupe 1917-19	1¾	7	51	*944	9.30	5944	6.20
Rear	34B Sedan 1918-19	1¾	7	51	*O953	10.05	O5953	6.70
Rear	34C, 34D, 6-44 Road. 1920-23	1¾	6	51⅛	*950	8.25	5950	5.50
Rear	34C, 34D. 6-44 Tour. & Coupe 1920-23	1¾	8	51⅛	*951	10.95	5951	7.30
Rear	34C, 34D, 6-44 Limo. & Sedan 1920-23	1¾	10	51	*O952	14.40	O5952	9.60
Rear	6-44 4 Pas. Sport 1923	1¾	7	51	*O954	9.75	O5954	6.50

Tuthill Replacement Springs—Continued

Locat'n	Model and Year	Wid.	Lvs.	L'gth	TITANIC No.	TITANIC Price	Equipment No.	Equipment Price
OLDSMOBILE								
Front	43, 8-44, 45, 45A 1916-19	2	7	36¼	3500	7.20	8500	4.80
Front	37-37A 1917-21	2	7	36	3503	7.35	8503	4.90
Front	45B-46 1919-23	2¼	8	38¼	3507	10.80	8507	7.20
Front	43A-47 1921-22	2	8	36	3511	8.10	8511	5.40
Front	43A-47 1923	2	12	36¾	O3513	10.80	O8513	7.20
L.Rear	43, 8-44, 45, 5 Pass. 1916-18	2	8	48	*O3501	10.50	O8501	7.00
Rear	37-37A Road. 1917-21	2¼	7	54	*O3510	11.70	O8510	7.80
Rear	37-37A Tour. 1917-21	2¼	9	54	*3504	14.25	8504	9.50
L.Rear	45, Roadster 1917	2	7	48⅜	*O54	12.00	O5054	8.00
L.Rear	45, 7 Pass. 1917	2	9	48	*O3505	12.60	O8505	8.40
L.Rear	45A, Roadster 1918-19	2	7	48¼	*O56	10.80	O5056	7.20
L.Rear	45A, Pacemaker 1918-19	2	8	47⅜	*O57	12.00	O5057	8.00
L.Rear	45A, 7 Pass. 1918-19	2	8	51¼	*O3506	11.55	O8506	7.70
Rear	45B-46, 5 Pass. 1919-23	2¼	9	56⅜	*O3509	16.65	O8509	11.10
Rear	45B-46, 7 Pass. 1919-23	2¼	10	56½	*3508	18.30	8508	12.20
Rear	43A-47 (Except Sedan) 1921-23	2¼	9	54	*3512	14.55	8512	9.70
OLDSMOBILE TRUCK (Economy)								
Front	T (Reg. No. Plates) 1919-21	2	7	37	3550	8.40	8550	5.60
Front	T (One Extra Plate) 1919-21	2	8	37	O3552	10.80	O8552	7.20
Front	T (Two Extra Plates) 1919-21	2	9	37	O3553	11.70	O8553	7.80
Front	T (Reg. No. Plates) 1922-23	2	9	37	O3556	10.50	O8556	7.00
Rear	T (Reg. No. Plates) 1919-21	2¼	10	50¼	3551	20.70	8551	13.80
Rear	T (One Extra Plate) 1919-21	2¼	11	50	O3554	21.90	O8554	14.60
Rear	T (Two Extra Plates) 1919-21	2¼	12	50¼	O3555	25.50	O8555	17.00
Rear	T (Reg. No. Plates) 1922-23	2¼	11	50	O3554	21.90	O8554	14.60
	Note—Extra plate front springs require No. 200BB spring clips. All rear springs require No. 225R spring clips.							
OVERLAND (Including Willys-Knight)								
Front	59-69-79-81-83 1912-16	1¾	7	36¼	0424	7.20	O5424	4.80
Front	80-84 (W. K.) 1915-16	1¾	7	36¼	0421	6.60	O5421	4.40
Front	82-86-89 (W.K.) 1915-18	2	8	37¾	O427	9.75	O5427	6.40
Front	84B (W. K.) 1916	1¾	9	36¼	O432	8.40	O5432	5.60
Front	75-75B 1916	1¾	6	36¼	O435	6.00	O5435	4.00
Front	85-4, 85-6 1917-18	1¾	9	36	437	8.10	5437	5.40
Front	88-4, 88-8 (W. K.) 1917-20	2	9	38	O439	10.20	O5439	6.80
Front	90 1917-19	1¾	7	36⅜	441	6.75	5441	4.50
Front	Light 4 1920-23	2	7	21¼	*444	4.80	5444	3.20
Front	20 (W. K.) 1920-23	2	6	36½	446	7.05	5446	4.70
Front	20A (W. K.) T. R. C. 1922-23	2	6	36¾	O449	7.35	O5449	4.90
Front	20A (W. K.) Sedan 1922-23	2	7	36¾	O450	8.55	O5450	5.70
L.Rear	59-69 1912-13	1¾	7	42½	O406	7.80	O5406	5.20
L.Rear	79 1914	1¾	8	42⅝	O418	9.00	O5418	6.00
L.Rear	81 1915	1¾	7	46	*O425	8.40	O5425	5.60
L.Rear	83 1916	1¾	7	46⅞	*O430	9.30	O5430	6.20
Rear	75-75B-90 Road. 1916-19	2	7	42	O443	10.00	O5443	7.00
Rear	75-75B-90 Tour 1916-19	2	8	42	442	11.25	5442	7.50
Rear	85-4, 85-6 1917-18	2¼	9	48½	*O438	18.00	O5438	12.00
Rear	88-4, 88-8, 89 (W. K.) 1917-20	2½	9	48	*O440	20.70	O5440	13.80
Rear	Light 4 Road. 1920-23	2	7	24⅞	*O419	5.40	O5419	3.60
Rear	Light 4 Ex. Roadster 1920-23	2	8	24⅞	*445	6.00	5445	4.00
Rear	20 (W. K.) 1920-23	2¼	7	55⅛	*O447	12.90	O5447	8.60
Rear	20A (W. K.) T. R. C. 1922-23	2¼	7	55¼	*O451	12.75	O5451	8.50
Rear	20A (W. K.) Sedan 1922-23	2¼	8	55¼	*O452	15.15	O5452	10.10
PACKARD								
Front	2-38, 3-38 1914-15	2¼	8	41⅜	P120	12.00	P5120	8.00
Front	1-25, 1-35, 2-25, 2-35 1916-17	2¼	9	41⅜	P198	12.15	P5198	8.10
Front	3-25, 3-25 Twin six 1918-23	2¼	8	41½	P170	11.70	P5170	7.80
Front	Single Six 1920-23	2	9	38½	P247	9.90	P5247	6.60
Rear	2-25, 2-35 Road. 1917	2¼	7	54¼	*P139	12.60	P5139	8.40
Rear	2-25, 2-35, 5 Pass. 1917	2¼	9	54	*P138	15.60	P5138	10.40
Rear	3-25, 3-35 Twin Six Tour. 1918-23	3	8	60¼	*P171	23.10	P5171	15.40
Rear	SingleSixRoad. 1920-23	2¼	8	54	*P248	12.90	P5248	8.60
Rear	Single Six 5 Ps. Tour. & Sport 1920-23	2¼	8	54	*P249	12.90	P5249	8.60
Rear	Single Six Bro. & 5 Ps. Coupe 1920-23	2¼	8	54	*P250	13.35	P5250	8.90
PACKARD TRUCK								
Front	1D-1E, 1 Ton	2½	9+40		*P201	16.80	P5201	11.20
Front	1½D-1½E, 1½ Ton	2½	9+41		*P203	18.90	P5203	12.60
Front	2D-2E, 2 Ton	2½	10+41		*P205	20.40	P5205	13.60
Front	EC, 2 Ton	2½	11+41⅜		*P279	16.80	P5279	11.20
Front	3D-3E-4D-4E, 3 & 4 Ton	3	10+42½		*P207	25.20	P5207	16.80
Front	ED-EE, 3 & 4 Ton	3	11+42¾		*P281	25.05	P5281	16.70
Front	5E-6E, 5 & 6 Ton	3	12+43¼		*P210	29.70	P5210	19.80
Front	EF-EG, 5 & 6 Ton	3	12+43¼		*P283	28.80	P5283	19.20
Rear	1D-1E, 1 Ton	2½	10+46¼		*P202	21.90	P5202	14.60
Rear	1½D-1½E, 1½ Ton	2½	10+46		*P204	25.50	P5204	17.00
Rear	2D-2E, 2 Ton	2½	10+46¼		*P206	27.00	P5206	18.00
Rear	EC, 2 Ton	2½	13+46⅛		*P280	29.10	P5280	19.40
Rear	3D-3E, 3 Ton	3	11+46¼		*P208	38.40	P5208	25.60
Rear	ED, 3 Ton	3	15+46		*P282	44.10	P5282	29.40
Rear	4D-4E-EE, 4 Ton	3	13+46		*P209	43.20	P5209	28.80
Rear	5E, 5 Ton	3½	12+54¼		*P211	65.70	P5211	43.80
Rear	EF, 5 Ton	3½	14+54⅛		*P284	64.50	P5284	43.00
Rear	6E-EG, 6 Ton	3½	13+54⅛		*P212	72.90	P5212	48.60
PAIGE								
Front	36 1912-13	1¾	5	34⅜	P1904	5.10	P6904	3.40
Front	36 1914-15	2	6	34¼	P1905	6.30	P6905	4.20
Front	6-46 1915	2	7	36¼	P1909	8.40	P6909	5.60
Front	6-36, 6-38 1916	2	7	36⅜	P1913	8.50	P6913	5.60
Front	6-46 1916	2	9	36⅜	P1914	9.50	P6914	6.20
Front	6-39 1917-20	2	8	36¾	1916	8.10	6916	5.40
Front	6-51, 6-55, 6-66 1st. Series 1917-21	2	10	40⅛	P1915	11.25	P6915	7.50
Front	6-42, 6-44 1920-22	2	10	38¼	P1918	10.20	P6918	6.80
Front	6-66 2nd Series, 6-70 1921-23	2	11	40⅛	1921	12.75	6921	8.50
L.Rear	36 1912-15	2	7	40	*P1906	9.30	P6906	6.20
Rear	6-46, 6-51, 6-55 1915-18	2½	7+50		*P1910	18.00	P6910	12.00
Rear	6-39 Road. 1917-18	2¼	7	44	*P1903	12.00	P6903	8.00
Rear	6-36, 6-38, 6-39 1916-20	2¼	7	43⅞	*P1912	12.30	P6912	8.20
Rear	6-55 1919-20	2½	8	52¼	*P1917	22.50	P6917	15.00
Rear	6-42, 6-44 Tour. 1920-22	2¼	12	61	*P1919	23.70	P6919	15.80
Rear	6-66, 6-70 Daytona Road. 1921-23	2½	10	61½	*P1922	21.30	P6922	14.20
Rear	6-66, 6-70 Coupe, Sport 1921-23	2½	11	61½	*P1923	21.30	P6923	14.20
Rear	6-66, 6-70 Tour. 1921-23	2½	12	61½	*P1920	22.50	P6920	15.00
Rear	6-66, 6-70 Sedan 1921-23	2½	12	61½	*P1924	23.70	P6924	15.80
PEERLESS								
Front	56 1916-17	1¾	10	36⅜	P153	9.00	P5153	6.00
Front	56 1918-21	1¾	10	36¼	P227	9.60	P5227	6.40
Front	66A 1923	2¼	9	41	*P274	11.70	P5274	7.80
Rear	56 1916-19	1¾	10	48⅜	P154	12.00	P5154	8.00
Rear	56 1920-21	1¾	10	48⅝	P228	12.00	P5228	8.00
Rear	66A 4 Ps. Tour., Coupe & Victoria 1923	2¼	8	60	*P275	15.15	P5275	10.10
Rear	66A 5 Ps. Sedan, 7 Ps. Tr., Limo. & Bro. 1923	2¼	9	60	*P276	17.25	P5276	11.50

Tuthill Replacement Springs—Continued

Locat'n	Model and Year	Wid.	Lvs.	L'gth	TITANIC No.	TITANIC Price	Equipment No.	Equipment Price
REO								
Front	**All 4 Cyl.** 1910-15	2	7	38⅜	**R2206**	**8.40**	R7206	5.60
Front	**6 Cyl.** 1915-19	2	9	38⅜	**2250**	**9.60**	7250	6.40
Front	**4 Cyl., 1916-19 & 6 Cyl.** 1920-23	2	7	38½	**2213**	**8.25**	7213	5.50
L.Rear	**4 Cyl.** 1912-17	2	7	44¾	**R2207**	**9.60**	R7207	6.40
Rear	**6 Cyl.** 1915-19	2¼	8	51⅝	***R2212**	**17.40**	R7212	11.60
Rear	**4 Cyl., 1918-19 & 6 Cyl.** 1920-21	2	10	54¾	***R2214**	**15.45**	R7214	10.30
Rear	**6 Cyl.** 1922-23	2	10	54¾	***R2215**	**16.20**	R7215	10.80
REO TRUCK (Speedwagon)								
Front	**F (Reg. No. of plates)**	2	9	38⅜	**2250**	**9.60**	7250	6.40
Front	**F (One extra plate)**	2	10	38⅜	**R2252**	**10.80**	R7252	7.20
Front	**F (Two extra plates)**	2	11	38⅜	**R2253**	**12.60**	R7253	8.40
Front	**F (Three extra plates)**	2	12	38⅜	**R2254**	**13.50**	R7254	9.00
Rear	**F (Reg. No. of plates)**	2¼	9	41⅝	**2251**	**13.05**	7251	8.70
Rear	**F (One extra plate)**	2¼	10	41⅝	**R2255**	**15.00**	R7255	10.00
Rear	**F (Two extra plates)**	2¼	11	41⅝	**R2256**	**17.40**	R7256	11.60
Rear	**F (Three extra plates)**	2¼	12	41⅝	**R2257**	**18.90**	R7257	12.60
REPUBLIC TRUCK								
Front	**9-¾ Ton, 75 Rapid Transit**	2	8	36¾	**R12**	**9.30**	R5012	6.20
Front	**10, 10X-1 Ton**	2¼	7	40½	**R14**	**10.50**	R5014	7.00
Front	**11, 11X-1½ Ton**	2¼	8	39⅝	**R28**	**11.10**	R5028	7.40
Front	**12-2 Ton**	2¼	9	39¼	***R16**	**13.50**	R5016	9.00
Front	**19-2½ Ton**	2¼	9	39⅝	***R35**	**13.50**	R5035	9.00
Front	**20-3½ Ton**	3	8	44⅜	***R30**	**23.40**	R5030	15.60
Rear	**9-¾ Ton**	2	8	48	***R13**	**13.20**	R5013	8.80
Rear	**75-Rapid Transit**	2¼	11	52½	***R45**	**21.90**	R5045	14.60
Rear	**10-1 Ton**	2¼	11+52¾		***R15**	**24.00**	R5015	16.00
Rear	**11-11X-1½ Ton**	2¼	12+52⅜		***R29**	**26.40**	R5029	17.60
Rear	**11X-1½ Ton**	2¼	15	53	***R37**	**32.70**	R5037	21.80
Rear	**11X-1½ Ton**	2¼	16	53	***R38**	**35.10**	R5038	23.40
Rear	**11X-1½ Ton**	2¼	17	53	***R39**	**37.80**	R5039	25.20
Rear	**12-2 Ton**	3	12	52½	***R17**	**45.60**	R5017	30.40
Rear	**19-2½ Ton**	3	12	52¾	***R36**	**40.50**	R5036	27.00
Rear	**20-3½ Ton**	4	13	53	***R31**	**57.00**	R5031	38.00
RICKENBACKER								
Front	**A** 1922-24	2	8	35⅞	**R19**	**8.10**	R5019	5.40
Rear	**A Tour. & Coupe** 1922-24	2½	9	56⅞	**R20**	**18.00**	R5020	12.00
R. & V. KNIGHT (Formerly Moline Knight)								
Front	**J** 1920-21	2	9	40¼	**M240**	**12.60**	M5240	8.40
Front	**R** 1923	2	9	37⅛	**R43**	**9.00**	R5043	6.00
Rear	**J Sport** 1920-21	2¼	9	56⅝	***M241**	**18.00**	M5241	12.00
Rear	**J Coupe & 7 Ps.** 1920-21	2¼	10	56⅝	***M242**	**18.60**	M5242	12.40
Rear	**J Sedan** 1920-21	2¼	11	56⅝	***M243**	**21.00**	M5243	14.00
Rear	**R Sedan** 1923	2¼	10	57½	***R44**	**17.25**	R5044	11.50
STAR								
Front	**All Models** 1922-23	1¾	5	34¼	***4050**	**5.10**	9050	3.40
Rear	**All Except Sedan** 1922-23	1¾	7	49½	***4051**	**8.85**	9051	5.90
Rear	**Sedan & Lt. Del'y.** 1922-23	1¾	9	49½	***S4052**	**11.25**	S9052	7.50
STEARNS-KNIGHT								
Front	**All Models, 4 & 8 Cyl.** 1916-19	2	8	36⅛	**S3603**	**9.30**	S8603	6.20
Front	**L4** 1920-22	2½	7	40	**S3605**	**14.10**	S8605	10.40
Rear	**L4, 5 Pass.** 1916-19	2½	8	50¼	***S3602**	**19.80**	S8602	13.20
Rear	**8 Cyl** 1916-19	2½	8	50½	***S3604**	**21.60**	S8604	14.40
Rear	**L4, 3 Pass.** 1920-22	2½	7	50¼	***S105**	**19.20**	S5105	10.80
Rear	**L4, Coupe & 5 Pass.** 1920-22	2½	7	50¼	***S106**	**21.00**	S5106	15.00
Rear	**L4, 7 Pass.** 1920-22	2½	8	50¼	***S3606**	**22.50**	S8606	16.00
Rear	**L4, Sedan & Limo.** 1920-22	2½	9	50¼	***S107**	**25.20**	S5107	17.80

Locat'n	Model and Year	Wid.	Lvs.	L'gth	TITANIC No.	TITANIC Price	Equipment No.	Equipment Price
STUDEBAKER								
Front	**4 Cyl.** 1914-15	2	5	38½	**S2305**	**6.90**	S7305	4.60
Front	**6 Cyl.** 1913-15	2	6	38½	**S2308**	**7.80**	S7308	5.20
Front	**4 Cyl.** 1916-18	2	7	38	**S2312**	**8.70**	S7312	5.60
Front	**6 Cyl. (1916-19) Sp'l & Big Six** 1920-23	2	7	38½	**2315**	**9.00**	7315	6.00
Front	**Ser. 19-4 Cyl.** 1918-20	1¾	7	34⅝	**2318**	**6.60**	7318	4.40
Front	**Light Six EJ** 1920-21	2	7	36½	**2322**	**7.65**	7322	5.10
Front	**Light Six EJ** 1922-23	2	7	36	**S2329**	**7.65**	S7329	5.10
L.Rear	**4 Cyl.** 1914-15	2	6	38¼	***S2306**	**7.50**	S7306	5.00
L.Rear	**6 Cyl. (Overhung)** 1913-15	2	7	50	**S2304**	**11.40**	S7304	7.60
L.Rear	**6 Cyl. (Underslung)** 1914-15	2	7	50½	***S2309**	**11.40**	S7309	7.60
L.Rear	**4 Cyl.** 1616-18	2	9	51¼	***S2313**	**12.30**	S7313	8.20
L.Rear	**6 Cyl.** 1916-18	2	9	51¼	***S2316**	**12.30**	S7316	8.20
Rear	**†Ser. 19-4 Cyl.** 1918-20	2	7	50¾	***S2319**	**13.00**	S7319	9.10
Rear	**†Ser. 19-6 & Special Six EH** 1918-21	2	8	56½	***2320**	**16.30**	7320	11.20
Rear	**†Ser. 19-6 Cyl. EG** 1918-19	2	9	56½	***S2321**	**18.40**	S7321	12.80
Rear	**†Big Six EG** 1920-21	2	8	56¾	***S2324**	**16.45**	S7324	11.50
Rear	**Light Six EJ. All ex. Sedan** 1920-23	2	7	50¼	***2323**	**10.95**	7323	7.30
Rear	**Light Six EJ. Sedan** 1920-23	2	7	50½	***S2325**	**10.65**	S7325	7.10
Rear	**Special Six Rd.** 1922-23	2	7+56½		***S2327**	**13.20**	S7327	8.80
Rear	**Special Six Cp. Tr. Sd. Big Six Cp.** 1922-23	2	8	56⅜	***S2328**	**14.85**	S7328	9.90
Rear	**Big Six Tour., Sedan** 1922-23	2	8	56⅜	***S2326**	**14.70**	S7326	9.80

†Equipped with Flange Bushings.

STUTZ								
Front	**4C** 1916	2	6	36¾	***S73**	**7.50**	S5073	5.00
Front	**R-S-G-H** 1917-20	2	7	36½	***S150**	**8.55**	S5150	5.80
Front	**K-KL-KLD-KLDN** 1921-22	2	7	36½	***S100**	**8.40**	S5100	5.60
Rear	**R-S-G-H** 1917-20	2	8	56⅛	***S123**	**15.00**	S5123	10.00
Rear	**K 4 Pass. (Early Series)** 1921	2	8	60	***S101**	**16.20**	S5101	10.80
Rear	**K-KL-KLD-KLDH 4 Pass. (Late Series)** 1921-22	2	9	60	***S75**	**18.00**	S5075	12.00
Rear	**K-KL-KLD-KLDH Cp. & 6 Pass.** 1921-22	2	9	60	***S102**	**18.00**	S5102	12.60
Rear	**K-KL-KLD-KLDH Sedan** 1921-22	2	9	60	***S76**	**18.90**	S5076	12.60
VELIE								
Front	**28-38** 1917-19	2	9	37⅜	**V32**	**9.60**	V5032	6.40
Front	**48** 1920-21	2	8	37	**V45**	**9.60**	V5045	6.40
Front	**34-58 ex. Sedan** 1920-23	1¾	6	35¼	**V51**	**6.15**	V5051	4.40
Front	**34-58 Sedan** 1920-23	1¾	7	35¼	**V56**	**7.20**	V5056	4.80
L.Rear	**28-38-48 Tour.** 1917-21	2	8	48¼	***V33**	**10.50**	V5033	8.00
L.Rear	**48 Sedan** 1920-21	2	9	48¼	***V55**	**13.50**	V5055	9.00
Rear	**34-58 ex. Sedan** 1920-23	2	7	54¼	***V52**	**11.10**	V5052	7.40
Rear	**34-58 Sedan** 1920-23	2	8	54¼	***V40**	**12.00**	V5040	8.00
WHITE TRUCK								
Front	**¾ Ton, ½" Eyes**	2	8	42	**W45**	**10.80**	W5045	7.20
Front	**¾ Ton, ⅝" Eyes**	2	8	42	**W104**	**10.80**	W5104	7.20
Front	**¾ Ton, ½" Eyes**	2	9	42	**W110**	**13.20**	W5110	8.80
Front	**¾ Ton, ⅝" Eyes**	2	9	42	**W111**	**13.20**	W5111	8.80
Front	**1½ & 2 Ton**	2½	9	42	***W27**	**15.90**	W5027	10.60
Front	**2 Ton, 20-45 (Same Length Each End)**	2½	9	42	***W107**	**15.75**	W5107	10.50
Front	**3 Ton, TAD**	3	9+44¼		***W80**	**24.00**	W5080	16.00
Front	**3 Ton, 40-40D**	3	11+44⅜		***W105**	**27.60**	W5105	18.40
Front	**5 Ton, ATC**	3	10+44¼		***W82**	**27.00**	W5082	18.00
Front	**5 Ton, 45-45D**	3	12+44⅜		***W106**	**30.00**	W5106	20.00
Rear	**¾ Ton**	2¼	11	54	***W46**	**21.60**	W5046	14.40
Rear	**1½ and 2 Ton**	3	12+48½		***W28**	**32.40**	W5028	21.60
Rear	**3 Ton**	3½	14+54¼		***W81**	**51.90**	W5081	34.60
Rear	**5 Ton**	5	12+56¾		***W78**	**70.20**	W5078	46.80

WILLYS-KNIGHT
(See Overland)

Replacement Axles and Shafts

The axles listed below are strictly high grade in every respect and guaranteed to fit the cars for which they are intended. The steel used is equal in every way to car manufacturer's specifications.

Code Number	To Fit	Std. Package	Each
AD1	Abbott-Detroit 44-50, 1912-13-14-15	10	4.50
P3	Abbott-Detroit 1916-17 Square, Right	10	4.00
P4	Abbott-Detroit 1916-17 Square, Left	10	4.00
AD4	Abbott-Detroit 6-44, 1917-18	10	4.70
AD2	Abbott-Detroit Larger Pinion Shaft	10	5.50
AD3	Abbott-Detroit Small Pinion Shaft	10	4.50
P10	Ace 1921-22, T. and 6 Sp	10	5.00
A9	Ace 1919-20, T. and 10 Sp	10	4.80
E1	Allen 32-37-41, 1916-17-18-19	10	4.00
G12	Allen 1920-21, 43	10	5.00
A10	Allen 37, 41 Pinion Shaft 1916 to 18	10	4.00
A11	Allen 43, Pinion Shaft 1919-20-21	10	4.00
P10	American 1919-20-21-22	10	5.00
P5	American 1917-1o-19, Right	10	4.20
P6	American 1917-18-19, Left	10	4.20
A6	Anderson 1918, 6 Splines and Tapered	10	5.00
A9	Anderson 1919-20-21, Open Models, Tapered and 10 Splines	10	4.80
P10	Anderson 1921-22, T. and 6 Sp	10	5.00
A5	Anderson 1922, same as A6 except smaller Taper	10	5.00
A-7	Apperson 1916-17-18-19-20-21-22-23, Right	10	6.00
A-8	Apperson 1916-17-18-19-20-21-22-23, Left	10	6.00
S5	Atlas Truck ¾-Ton	6	5.00
H12	Auburn 6-38, 1915	10	6.00
M-18	Auburn 6-40A, 1916, Right	10	5.50
M-19	Auburn 6-40A, 1916, Left	10	5.50
A-5	Auburn 6-39, 1917-18 and early 19	10	5.00
A-6	Auburn, same as A-5, except larger taper	10	5.00
A-9	Auburn 39, 10 Spline, 1919-20, early 21, Open Models	10	4.80
C14	Auburn 1919-20-21, Closed Models	10	6.50
P-10	Auburn 39, Late 1921-22	10	5.00
A-12	Auburn Pinion Shaft, 6-44, 1917	10	7.50
CH-1	Beggs "6"	15	5.70
E11	Bethlehem Truck 1-Ton, Right	6	14.00
E12	Bethlehem Truck 1-Ton, Left	6	14.00
R15	Bethlehem Truck D-G-DG, 1½-2 Ton, 1918-21, Right	6	6.50
R16	Bethlehem Truck D-G-DG, 1½-2 Ton, 1918-21, Left	6	6.50
F10	Bethlehem Truck 2½-3½ Ton, R. H	6	7.00
F11	Bethlehem Truck 2½-3½ Ton, L H	6	7.00
G6	Birch 1920-21-22	15	3.50
C21	Birch Pinion Shaft, 1920-21-22	10	4.50
B10	Briscoe Square, 1914-15, Right	10	5.00
B11	Briscoe Square, 1914-15, Left	10	5.00
B4	Briscoe Splined, 1914-15, Right	10	5.00
B5	Briscoe Splined, 1914-15, Left	10	5.00
B3	Briscoe "4"-24-1917-18-19-20-21-22	10	4.00
B-4	Briscoe 4-38-1916, Splined	10	5.00
B6	Briscoe Bailey Type, Early 1917	10	5.00
B22	Briscoe Pinion Shaft, 1920-21	12	3.00
B-1	Buick B & C 36 & 37, Right 1914-15	10	5.50
B-2	Buick B & C 36 & 37, Left 1914-15	10	5.50
B-12	Buick 10-32-33-17-40	10	4.40
B-13	Buick 21-25-28-29-30-31, Right 1914-15	10	4.80
B-14	Buick 21-25-28-29-30-31, Left 1914-15	10	4.80
B-7	Buick B 24-25, C 24-25, Right 1914-15	10	5.00
B-8	Buick B 24-25, C 24-25, Left 1914-15	10	5.00
B-17	Buick B 54-55, C 54-55, Right 1914-15	9	4.80
B-18	Buick B 54-55, C 54-55, Left 1914-15	9	4.80
B-9	Buick D-E-H-E-44-5-6-7, 1917 to 24	10	4.00
O19	Buick D-E-H-K-48-49-50, 1917 to 24	10	4.00
O15	Buick 4 Cyl. D & E 34-35-36 & 37, 1916-17-18-21-24	10	4.00
B20	Buick D 54-55, Right, 1916	10	6.00
B21	Buick D 54-55, Left, 1916	10	6.00
B24	Buick Drive Shaft D 54-D55, 1916	6	11.00
B23	Buick Drive Shaft D44-D45, 1916, 20 Pitch Thrust	6	10.00
B23-X	Buick Drive Shaft D44-D45, 1917, 12 Pitch Thrust	6	10.00
B25	Buick Drive Shaft E-H-K, 44-45-46-47, 1918-19-20	6	9.50
B32	Buick Drive Shaft E-H-K, 44-45-46, 1921	6	10.00
B33	Buick Drive Shaft E-H-K, 44-45-46, 1922, 47, 1921-23	6	10.00
B26	Buick Drive Shaft E-H-K, 49-50, 1918-19-20-21	6	9.50
B28	Buick Drive Shaft 4 Cyl., 22-35, 1921-23	6	9.00
B1	Buick Truck B4, Right	10	5.50
B2	Buick Truck B4, Left	10	5.50
B29	Buick Truck C4 & D4, 1-Ton, Right 1912-16	10	6.60
B30	Buick Truck C4 & D4, 1-Ton, Left 1912-16	10	6.60
P10	Bush 1921-22, 4 and 6 Cyl., T and 6 Sp	10	5.00
G6	Bush 1918-19-20, 4 Cyl., 6 Spline Ends	15	3.50
C14	Case 1919-20-21, Ten Splines and Taper	10	6.50
M18	Case 25 R-30 R, 4 Cyl. 1914-15, Right	10	5.50
M19	Case 25 R-30 R, 4 Cyl. 1914-15, Left	10	5.50
H8	Chalmers 30-1912-13, Right	10	6.50
H9	Chalmers 30-1912-13, Left	10	6.50
CH7	Chalmers 24 & 26, 6 Cyl. 1914, Right	10	6.00
CH8	Chalmers 24 & 26, 6 Cyl. 1914, Left	10	6.00
CH9	Chalmers 32 A, 6-40, 1916-17	10	5.00
CH1	Chalmers 35A, 6-30, 1916-17-18	15	5.70
CH3	Chalmers 35 C 5 Pass., 1919-20-21-22	10	5.70
CH4	Chalmers 32B, 35C, 7 Pass., 1919-22	10	7.30
C7	Chandler 1¼ in. 1914-15-16-17	10	4.20
C8	Chandler 1⅜ in. 1917-18-19-20-21	10	4.50
C9	Chandler Pinion Shaft, 1916 to 1919	10	5.00
C12	Chandler Pinion Shaft, 1916-22	10	5.00
C15	Chandler New Series 29, 1922-23, Ten Splines	10	5.00
C11	Chandler Pump Shaft, All Models	20	.40
CT1	Chevrolet Valve Tappets, Fact. Part No. 844, Std. .005, .010, .015	8	3.50
CT2	Chevrolet Valve Tappets, Late Models	8	3.70
C1	Chevrolet 490, All Models	15	1.80
C6	Chevrolet 490 Drive Shaft, All Models up to Early 1921	10	4.00
C5	Chevrolet 490 Drive Shaft, Late 1921-23	10	4.00
C3	Chevrolet Baby Grand, 1914-15-16-17	10	4.00
C4	Chevrolet Baby Grand, 1918 to 22	10	5.00
C18	Chevrolet "H" Pinion Shaft, 1914-15-16	10	4.50
C19	Chevrolet Truck, 1-Ton, All Models	6	15.00
P12	Clydesdale Truck L25	10	5.20
S24	Clydesdale Truck 1½-Ton	4	22.00
C17	Cleveland 40, 1919	10	6.00
C10	Cleveland 41, 1920-21-22-23	10	5.20
C16	Cleveland Pinion Shaft, 1919-20-21	10	4.00
CH3	Cole Model 850, 1915, Round Housing	10	5.70
C13	Cole 8-60, 1916-17-18-19, 6 Spline Ends	10	6.00
C14	Cole 8-70, 1919 to 1922, 10 Spline Ends	10	6.50
C22	Cole Pinion Shaft 8-70, Late 1919-20-21-22	10	5.00
C24	Cole Pinion Shaft 8-90, 1923	10	5.00
E5	Columbia, All Models, 1919-20	10	6.00
J3	Columbia, All Models, 1922-23, Right	10	7.00
J4	Columbia, All Models, 1922-23, Left	10	7.00
C14	Comet, 1919-20-21	10	6.50
G6	Commonwealth 1917-18-19-20-21	15	3.50
1	Continental Pump Shafts, Part No. 7RK 309	6	4.70
2	Continental Pump Shafts, Part No. 7WK 301, 7W	6	5.20
5	Continental Pump Shafts, Part No. 7D 4270	6	4.20
P12	Commerce Truck "E"	10	5.50
P11	Commerce Truck Merchants Express, ¾-Ton	10	5.00
G6	Crow Elkhart 6 Cyl., 6 Spline Ends	10	3.50
M18	Davis 6-E 1916, Right	10	5.50
M19	Davis 6-E 1916, Left	10	5.50
A5	Davis Splined, 1916-17-18-19	10	5.00

Replacement Axles and Shafts—Continued

Code Number	To Fit	Std. Package	Each
A6	Davis Splined, 1916-17-18-19, same as A5, except larger taper	10	5.00
CH3	Davis 1920	10	5.70
P10	Davis Late 1920-21, Early 1922	10	5.00
J3	Davis 71-74-75, Late 1922-23, Right	10	7.00
J4	Davis 71-74-75, Late 1922-23, Left	10	7.00
C12	Davis Pinion Shaft x 38	10	5.00
G6	Dixie Flyer 1920-21-22	15	3.50
G8	Dixie Flyer 50 and 70 Pinion Shaft	10	2.30
G5	Dixie Flyer LS-35 Pinion Shaft	10	2.30
P10	Dixie Flyer 1920-21-22	10	5.00
D6	Dodge St. Center, 1916 to Early 1922	25	2.10
D5	Dodge Turned Center, 1916 to Early 1922	15	2.40
D6X	Dodge Southern Tread, 1916 to 1922	10	2.50
D11	Dodge 1923-1924	10	2.80
D7	Dodge Drive Shaft, Long, 1915 to 1917, Length 58½	10	8.50
D8	Dodge Drive Shaft, Short, 1917-22, Length 57⅛	10	8.50
D12	Dodge Drive Shaft, 1923, Part No. 14698	10	8.50
D6	Dodge Truck, ¾-Ton, 1916 to Early 1922	25	2.10
D3	Dort 5-5A-6-8-9-10, 10C-11-29	15	3.80
D4	Dort 15-56 in. Tread, 1920-21	10	3.80
D13	Dort 19, 1922-23	10	4.50
D14	Dort Drive Shaft, 8-11-10-15-39, 1919-20	10	7.50
D15	Dort Drive Shaft, 5-5A-6-9-15-29	10	7.50
E11	Dorris 6-80, 1919, Right	6	14.00
E12	Dorris 6-80, 1919, Left	6	14.00
H10	Dorris 1920-21	10	7.00
D10	Durant 6 Cyl	10	6.00
D9	Durant 4 Cyl	10	4.70
E13	Earl 4-40, 1922-23	10	5.50
E1	Elcar "E," 1916-17, 6 Spline and Tapered	10	4.00
E2	Elcar 6 Spline both ends, 1917 to 20	10	4.00
P10	Elcar 1920-21	10	5.00
E6	Elcar Pinion Shaft, Large, 1916-17	10	5.50
E6X	Elcar Pinion Shaft, Small, 1916-17	10	5.50
E8	Elcar Pinion Shaft, 1918-19-20-21	10	4.50
E2	Elgin Splined both ends, 1917-18	10	4.00
E1	Elgin Tapered & 6 Spline, 1917 to 19	10	4.00
A9	Elgin Tapered & 10 Spline, 1919 to 21	10	4.80
E4X	Elgin Pinion Shaft, 1917-18, Small	10	2.50
E4	Elgin Pinion Shaft, 1917-18, Large	10	2.50
E6	Elgin Pinion Shaft 1643A, 1916-17, Large	10	5.50
E6X	Elgin Pinion Shaft 1643, 1916-17, Small	10	5.50
E7	Elgin Pinion Shaft, 1920-21	10	4.00
O21	Empire 6-60, 1916-17	10	5.40
P5	Empire 50-51-52, 1918, Right	10	4.20
P6	Empire 50-51-52, 1918, Left	10	4.20
S5	Empire 70-71-73, 1919	10	5.00
AD3	Empire Pinion Shaft, 70	10	4.50
E5	Essex 1918-19-20-21-22-23	10	6.00
T3	Federal Truck 1½-2 Ton 1917-20, 6 Spline	6	12.00
T4	Federal Truck ½-2 Ton 1920-22, 10 Spline	6	12.00
T5	Federal Truck 3½ ton 1917-20, 6 Spline	6	18.00
T10	Federal Truck 3½ Ton 1920-22, 10 Spline	6	18.00
T6	Federal Truck 5 Ton 1917-20, 6 Spline	6	27.00
T7	Federal Truck 5 Ton 1920-22, 19 Sp	6	27.00
F3	Ford Black Center, Regular Tread 56 in.	20	1.35
FX3	Ford Black Center, Southern Tread 60 in.	10	1.80
F5	Ford Drive Shafts	15	2.70
F4	Ford Truck, All Models	10	5.00
F6	Ford Truck Drive Shaft, All Models	6	7.00
F7	Franklin 1914-15-16	10	6.20
F8	Franklin 1917-18-19-20-21	10	6.50
F9	Franklin Late 1921 and 1922	10	6.50
D4	Gardner 1919-20-21	10	3.80
D13	Gardner A, 1922 and 1923	10	4.50
H13	Glide "40," 1917-18-19	10	6.00
G9	Grant "M," 1915-16, Square Ends	10	5.30
G6	Grant "6" V-K-G-Gx, 1917-18-19, Turned Center	15	3.50
G7	Grant "6" V-K-G-Gx, 1917-18-19, Straight Center	15	3.00
G12	Grant 1920-21-22	10	5.00
G13	Grant Drive Shaft "T," 1915	10	6.00
G10	Grant Drive Shaft V-K, 1916-17	10	6.00
G11	Grant Drive Shaft G-Gx, 1918-19	10	6.00
G8	Grant Pinion Shaft 1915-16-17, Small Taper	10	2.30
G5	Grant Pinion Shaft, 1918-19, Large Taper	10	2.30
G11	Grant Pinion Shaft H & HX, 1920-21	10	4.00
B29	G. M. C. Truck 1½ ton Bevel Gear Drive, Right	10	6.60
B30	G. M. C. Truck 1½ Ton Bevel Gear Drive, Left	10	6.60
G1	G. M. C. Truck K16, 1 Ton, Right	10	6.80
G2	G. M. C. Truck K16, 1 Ton, Left	10	6.80
T8	G. M. C. Truck 21-21, 1 & 1½ Ton, 1916-22	6	20.00
T9	G. M. C. Truck 31, 1½ Ton, 1917 and 22	6	20.00
T3	G. M. C. Truck 31-41, 1½ & 2 Ton, 1916-20, 6 Spline	6	12.00
T4	G. M. C. Truck 41, 2 Ton, 1919-20, 10 Spline	6	12.00
T5	G. M. C. Truck 71, 3½ Ton, 1916-20, 6 Spline	6	18.00
T10	G. M. C. Truck 3½ Ton, 1920-22, 10 Spline	6	18.00
T6	G. M. C. Truck 101, 5 Ton, 1916-20, 6 Spline	4	27.00
T7	G. M. C. Truck 5 Ton, 1920-22, 10 Spline	4	27.00
G17	Graham Bros. Truck 1½ Ton, Late Model 1921-22-23	6	16.00
S10	Gramm-Bernstein Truck 3½ Ton	2	50.00
ST4	Grey, All Models	10	2.30
B12	Halliday 32, 1913-14	10	4.40
H1	Haynes 34 to 46 inc., Right	10	5.50
H2	Haynes 34 to 46, inc., Left	10	5.50
H23	Haynes Type T, 1916-17, Right	10	5.50
H24	Haynes Type T, 1916-17, Left	10	5.50
H3	Haynes 50-47-55 and 75, 1921-22, Right	10	5.50
H4	Haynes 50-47-55 and 75, 1921-22, Left	10	5.50
H7	Haynes Pinion Shaft 34-36, 40-41, 1916-17	10	5.50
H5	Haynes Pinion Shaft 36 to 46, 1917-18-19-20	10	6.50
H22	Haynes Pinion Shaft 30-33, 34-5-6-7 with Hess Axle	10	5.50
H6	Haynes Pump Shaft, All Models	10	4.00
H10	Holmes, All Models to 1920	10	7.00
H10	Hudson, Super-Six, 1917-23	10	7.00
B12	Hudson "20"	10	4.40
CH7	Hudson 6-54, 1914-15, Right	10	6.00
CH8	Hudson 6-54, 1914-15, Left	10	6.00
H8	Hudson 37, Sq. Ends, 1912-13, Right	10	6.50
H9	Hudson 37, Sq. Ends, 1912-13, Left	10	6.50
H18	Hudson 6-40, 1913-14, Right	10	6.00
H19	Hudson 6-40, 1913-14, Left	10	6.00
H20	Hudson 6-40, 1915-16	10	6.00
H21	Hudson Pinion Shaft, 6-40, 1914-15-16	10	4.50
H16	Hudson Pump Shafts, Super-Six, HJM Part No. 13015, 1917-19	10	2.00
H17	Hudson Pump Shafts, Super-Six SM, 16 M, Part No 16312, 1919-22	10	2.00
H12	Hupmobile "N," 4 Spline, 1915-16	10	6.00
H13	Hupmobile "N," 6 Spline, 1916-17	10	6.00
H11	Hupmobile R-1-2-3, 1917 to 1922	10	3.60
H25	Hupmobile Pinion Shaft, 1918-19	10	4.50
P12	Imperial "45"	10	5.50
14	Indiana Truck T, 1 Ton, 1917-18	4	20.00
S14	Indiana Truck 12, 1½ Ton, 1920-22	6	20.00
S16	Indiana Truck 20, 2 Ton, 1915-16	6	32.00
S12	Indiana Truck 20, 2 Ton, 1917-20	6	22.00
S6	Indiana Truck 25, 2½ Ton, 1917-22	6	32.00
R3	International T-H, ¾ and 1 Ton, 1915 and 16	12	6.00
P3	Interstate Square, 1915-16-17, Right	10	4.00
P4	Interstate Square, 1915-16-17, Left	10	4.00
P5	Interstate Splined, 1918, Right	10	4.20
P6	Interstate Splined, 1918, Left	10	4.20
P5	Jackson 3-49, 1917, Right	10	4.20
P6	Jackson 3-49, 1917, Left	10	4.20
P10	Jackson 1920-21	10	5.00
J1	Jeffrey or Nash 4-6 Cyl. 1916 to 1920	10	5.70
J3	Jewett, All Models 1922-1923, Right	10	7.00
J4	Jewett, All Models 1922-1923, Left	10	7.00
H10	Jordan B-C-F, 7-Pass., 1917 to 21	10	7.00
E5	Jordan M, 5-Pass., 1920	10	6.00
J5	Jordan MX, 5-Pass., 1922-23	10	6.00
H12	King 4 Spline, 1914-15	10	6.00
H13	King 6 Spline, 1916-17-18	10	6.00
C13	King G, 6 Spline Both Ends, 1918-19	10	6.00
C14	King H & J, 10 Spline Both Ends, 1920-21	10	6.50

Replacement Axles and Shafts—Continued

Code Number	To Fit	Std. Package	Each
S15	Kissel Truck, Model 20.	6	20.00
S5	Lexington 6-O, Spline and Taper, 1917	10	5.00
L5	Lexington 6-S-T, 1920-21.	10	5.00
CH1	Liberty 10-A, 1916-17.	10	5.70
E5	Liberty 10-B, 10-C, 1917 to 1922.	10	6.00
M21	Mack Truck 8-AC, 3½-5½ and 7½ Ton, 1916 to 1921, Right.	6	9.80
M22	Mack Truck 8-AC, 3½-5½ and 7½ Ton, 1916 to 1921, Left.	6	9.80
M23	Mack Truck 9-AB, 1916 to 1921.	6	5.50
T3	Mack Truck 11-AB, 1½-2-2½ Ton, 1916-17-18-19-20-21, 6 Spline.	6	12.00
T4	Mack Truck 11-AB, 1½-2-2½ Ton, 1916-17-18-19-20-21, 10 Spline.	6	12.00
G6	Maibohm 1920-21, "B".	15	3.50
P3	Marion-Handley 1917, Right, Square and Tapered.	10	4.00
P4	Marion-Handley 1917, Left, Square and Tapered.	10	4.00
P5	Marion-Handley B. R. 6 Cyl., 1918-19, Right.	10	4.20
P6	Marion-Handley B. R. 6 Cyl. 1918-19, Left.	10	4.20
M8	Marmon "34" 1917-18-19, Right.	6	8.50
M9	Marmon "34" 1917-18-19, Left.	6	8.50
M16	Marmon 1920-21-22, Right	6	10.80
M17	Marmon 1920-21-22, Left.	6	10.80
M1	Maxwell "25" 1915 to 1919, Right.	15	1.90
M2	Maxwell "25" 1915 to 1919, Left.	15	1.90
M3	Maxwell "25" 1920-21.	15	1.90
M7	Maxwell New Series, 1923-24.	10	4.50
M1X	Maxwell "25" RH 1915-19, Southern Tread.	10	2.20
M2X	Maxwell "25" LH 1915-19, Southern Tread.	10	2.20
M5	Maxwell "25" Drive Shaft, 1914 to 17, 54½ inches.	10	3.70
M6	Maxwell "25" Drive Shaft, 1918-19, 58¼ inches.	10	3.70
M4	Maxwell Drive Shaft, 1920-21-22	10	3.70
M10	Maxwell Truck Drive Shaft, Short, 32¾ inches.	10	3.50
M11	Maxwell Truck Drive Shaft, Long, 42 in.	10	3.50
M15	Maxwell Truck, 1-1½ Ton, 1917-22.	6	13.00
P3	Mitchell D 40 1916-17 Square, Right.	10	4.00
P4	Mitchell D 40 1916-17, Square, Left.	10	4.00
P5	Mitchell D 40 1917-18, Splined, Right.	10	4.20
P6	Mitchell D 40 1917-18, Splined, Left.	10	4.20
M20	Mitchell C 42 Series 1-2-3, 1916 to 18 E-40, E-42, 1919-20.	10	5.00
M31	Mitchell F 40, 1920.	10	5.50
P9	Mitchell C 42-M 7-42, early 1916, B35-B-45, 1915, Spline Both Ends.	10	5.50
M18	Moline-Knight, 1915-16-17-18, Right.	10	5.50
M19	Moline-Knight, 1915-16-17-18, Left.	10	5.50
P3	Monarch, 1914-15, Right.	10	4.00
P4	Monarch, 1914-15, Left.	10	4.00
M13	Monroe M3-4, S7-8-9-10, 1917-21, Right	10	5.50
M14	Monroe M3-4, S7-8-9-10, 1917-21, Left	10	5.50
H12	Moon 6-40, 2d Style, 1915.	10	6.00
S5	Moon 6-43, 1st Style, 1916-17.	10	5.00
M30	Moon 6-43, 2d Style, 1916-17.	10	6.00
S2	Moon 6-36, 1918.	10	5.00
S8	Moon 6-46, 1919, Right.	10	9.60
S9	Moon 6-46, 1919, Left.	10	9.60
E5	Moon 6-48, 1920-21.	10	6.00
J3	Moon 6-40, 1922-23, Right.	10	7.00
J4	Moon 6-40, 1922-23, Left.	10	7.00
J1	Nash or Jeffrey, 6-Cyl., 1918 to 1923	10	5.70
J2	Nash or Jeffrey, 4-Cyl., 1921 to 1923	10	5.70
C13	National, 1916-17-19.	10	6.00
C14	National, 1920-21.	10	6.50
C9	National Pinion Shaft, 1916 to 1919	10	5.00
B7	Oakland "37", 1915, Right.	10	5.00
B8	Oakland "37", 1915, Left.	10	5.00
O9	Oakland 6-32B, 1916.	10	4.00
O15	Oakland, 1916-17-18-19-20-21.	15	4.00
O30	Oakland Pinion Shaft, 32-32B-34-34B-34C, 1916 to 1920.	10	3.50
B7	Oldsmobile 42, 1914-15, Right.	10	5.00
B8	Oldsmobile 42, 1914-15, Left.	10	5.00
O21	Oldsmobile 43, 4-Cyl., 1916.	10	5.40
O20	Oldsmobile 44, 8-Cyl., 1916-17-18-19.	10	5.90
O19	Oldsmobile 45-A, 45-B, 8-Cyl., 1920	10	5.00
O18	Oldsmobile 37, 6-Cyl., 1917-18-19-20.	10	5.40
O17	Oldsmobile 43-A, 1921.	15	4.10
R1	Oldsmobile Truck T, ¾ Ton, 1919 to 1921, Splined both ends.	10	5.20
O10	Overland "59" Right.	10	4.00
O14	Overland "59" Left.	10	4.00
O1	Overland 69-79-80-81-83, Right.	15	3.00
O2	Overland 69-79-80-81-83, Left.	15	3.00
O3	Overland 85-4, 85-6, Right.	15	3.00
O4	Overland 85-4, 85-6, Left.	15	3.00
O5	Overland 90, Touring, Right.	15	3.00
O6	Overland 90, Touring, Left.	15	3.00
O7	Overland 75-90 C. C. 90 R, Right.	15	3.00
O8	Overland 75-90 C. C. 90 R, Left.	15	3.00
O11	Overland 90 B-90, B. T.	15	3.00
O13	Overland "4", 1919-20-21, early 1922	15	1.90
O16	Overland 4A, late 1922-23.	10	5.30
O22	Overland Willys-Knight "20".	10	5.50
O29	Overland Willys-Knight 20A, late 1922-23.	10	5.00
O12	Overland Drive Shaft, 79.	10	4.20
O24	Overland Drive Shaft, 88-4, 88-6, 88-8, 1917-1918.	10	4.20
O28	Overland Drive Shaft, 4-T-R-C-S.	10	10.50
O26	Overland Drive Shaft, 90 R-C. C.-75T-R.	10	3.80
O25	Overland Drive Shaft, 90T.	10	3.80
O27	Overland Drive Shaft, 90BT, Sedan.	10	3.80
O23	Overland Drive Shaft, 81-83.	10	4.20
CH	Paige 6-66, Late 1922-23.	10	7.30
P11	Paige 6-66, 1921.	10	5.20
P10	Paige 6-42, 1920-21.	10	5.00
P1	Paige 6-51, 6-55, Splined, 1918-19-20, Right.	10	4.50
P2	Paige 6-51, 6-55, Splined, 1918-19-20, Left.	10	4.50
P3	Paige 6-36-38-39, Square, 1916-17, Right.	10	4.00
P4	Paige 6-36-38-39, Square, 1916-17, Left.	10	4.00
P5	Paige 6-39, Splined, 1918-19, Right.	10	4.20
P6	Paige 6-39, Splined, 1918-19, Left.	10	4.20
P7	Paige 6-51, G1-2-3, Square, 1915-18, Right.	10	4.30
P8	Paige 6-51, G1-2-3, Square, 1915-18, Left.	10	4.30
B12	Paige 25-4 Cyl.	15	4.40
P12	Paige 36-4 Cyl., 1915.	10	5.50
T9	Paige Truck, 52-19-1½ Ton, 1918 to 1921.	6	18.00
T3	Paige Truck, 50-18-2½ Ton, 1918 to 1920.	6	12.00
T5X	Paige Truck, 51-18-3½ Ton, 1918 to 1921.	6	18.00
S5	Patterson 6-42, 1916.	10	5.00
S8	Patterson Sedan, 1920-21, Right.	10	9.60
S9	Patterson Sedan, 1920-21, Left.	10	9.60
AD3	Patterson Pinion Shaft, 45-46, 1916-17-18.	10	4.50
H10	Peerless, 1916 to 1919, early 1920	10	7.00
H14	Peerless, 1920-21-22.	6	15.00
P38	Pierce Arrow Truck, 5 Ton, 12 Spline, Rq., 1919-22.	4	27.00
P13	Pierce Arrow Truck, 2 Ton, Model 1914, X1, X3, X4, 1914-21.	6	20.00
S27	Pilot, 1921-22.	10	5.70
H26	Pilot Pinion Shaft, 1920, Hess Axle	10	5.00
G5	Pullman Pinion Shaft, 1918-19, Large Taper.	15	2.30
G8	Pullman Pinion Shaft, All Models up to 1918, Small Taper.	15	2.30
S5	Premier, 1917-18-19.	10	5.00
CH4	Premier, 1919.	10	7.30
S8	Premier, 1920-21, Right.	10	9.60
S9	Premier, 1920-21, Left.	10	9.60
E11	Premier, 1921, Right.	6	14.00
E12	Premier, 1921, Left.	6	14.00
G9	Regal, 1915-16, Square Ends.	10	6.00
R2	Reo 4 Cyl., 1916 to 1919, 6 Cyl., 1920	10	6.00
R6	Reo 6 Cyl., 1916 to 1919	10	6.00
R6	Reo Speed Wagon, Less Flange	10	6.00
R1	Republic Truck, ¾ Ton	10	5.20
R3	Republic Truck, 10-1 Ton, 11-1½ Ton, 16-1¼ Ton, 10E-1 Ton, Speed Wagon, 1916-22.	10	6.00

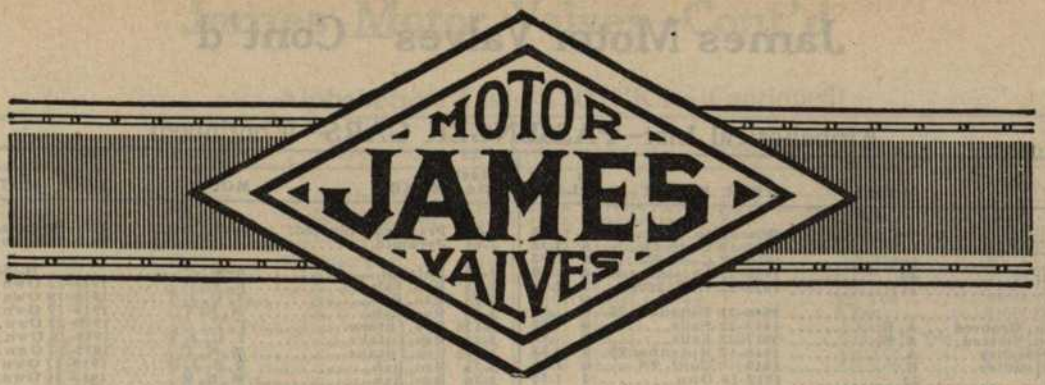
Replacement Axles and Shafts—Continued

Code Number	To Fit	Std. Package	Each
R5	Republic Truck, 11½ Ton, A12-2 Ton, 12-2 Ton, 19-2½ Ton, 1916-22	10	7.00
R7	Republic Truck Pinion Shaft, 9¾ Ton, 1916-18	10	4.50
R8	Republic Truck Pinion Shaft, 10-1 Ton, 11-1½ Ton, A12-2 Ton, 12X-2 Ton up to early 1918	10	4.50
R9	Republic Truck Pinion Shaft, 10-1 Ton, 16-1¼ Ton, 11X-½ Ton, 19-2½ Ton, 10E-1 Ton, Speed Wagon, late 1918-22	10	4.50
E11	Revere, 1920-21-22, Right	6	14.00
E12	Revere, 1920-21, Left	6	14.00
R13	Rickenbacker, All Models, 1922-23	10	5.70
E11	Roamer, 1920 RH, Dusenberg Motor	6	14.00
E12	Roamer, 1920 LH, Dusenberg Motor	6	14.00
CH4	R. & V. Knight "J," 1918-19-20-21-22	10	7.30
C19	Sampson Truck, 1 Ton	6	15.00
S1	Saxon "4" Cyl.	15	3.50
S3	Saxon "6S" 1915, Square	15	5.50
S4	Saxon "6," 1916-17-18	15	5.00
S2	Saxon "6," 1919-20	15	5.00
CH3	Saxon Duplex "4," 1920-21-22, Timken	10	5.70
S27	Saxon Duplex "4," 1921-22, Spacke	10	5.70
SB1	Scripps-Booth 4 Cyl. Model C, 1916-17	10	5.60
D3	Scripps-Booth Model G, 4 Cyl., 1918	15	3.80
O15	Scripps-Booth 6 Cyl., 1918-19-20	15	4.00
O17	Scripps-Booth 1922	10	4.10
SB2	Scripps-Booth Pinion Shaft, 1917	10	5.00
G6	Seneca, 1919-20-21-22	15	3.50
C21	Seneca Pinion Shaft, 1919 to 1922	10	4.50
T11	Service Truck, 1 Ton Model 120, 1918-21	6	12.00
O-17	Sheridan 41-42, 4 Cyl., 1920-21	15	4.10
G6	Skelton 1920-21-22	15	3.50
SF3	Smith Form-A-Truck, 1 Ton	25	2.50
CH4	Standard 8, All Models to 1921	10	7.30
H10	Standard Truck Axle E-G-H-I-J, 1917-22 (Steel Car Co.)	10	7.00
ST4	Star, All Models	10	2.30
S5	Stephens 70-74-75-76-78-82-83-84-85-86, 1917-18-19	10	5.00
S8	Stephens 82-83-84-85-86, 1920, Right	10	9.60
S9	Stephens 82-83-84-85-86, 1920, Left	10	9.60
CH4	Stephens Late 1920-21-22	10	7.30
AD3	Stephens Pinion Shaft, Model 75	10	4.50
ST1	Studebaker 4-6 Cyl., 1914 to 1918	15	3.20
ST3	Studebaker Big 6, 1919-22, Spec. 6, 1920	10	5.00
ST2	Studebaker 4, 1919, Light 6, 1919-20-21	10	4.50
S25	Stutz, All Models, 1915 to 1922	10	9.00
T1	Templar 6 Spline, 1919-20, Right	6	12.00
T2	Templar 6 Spline, 1919-20, Left	6	12.00
T13	Templar 10 Spline, Right, 1921-22	6	12.00
T14	Templar 10 Spline, Left, 1921-22	6	12.00
G6	Tulsa, All Models	10	3.50
WM1	Velie 22, 1916	10	6.00
CH1	Velie 27-28, 1917	15	5.70
E5	Velie 1918-19-20-21	10	6.00
WM2	Velie Pinion Shaft 22, 1916	10	5.80
G12	Velie 34, 1920-1921	10	5.70
CH3	Velie 38, 1919	10	5.70
V2	Vim Truck, Model 20-21, 1917 to 1920	10	4.50
V1	Vim Truck, Model 27, 1919-20	6	8.50
H10	Wescott A-B-C-48, 1916-22	10	7.00
E5	Wescott A-B-C-38, Late 1919 to 1922	10	6.00
E11	Wescott 38, 1920, Right	6	14.00
E12	Wescott 38, 1920, Left	6	14.00
W1	White Truck, ¾ Ton, 6 Spline on Differential End, 1919 to 1922	4	16.00
W2	White Truck, ¾ Ton, Square Both Ends, 31¾ in. over all	4	16.00
W6	White Truck, ¾ Ton, Square Both Ends, 27 7/8 in. over all	4	16.00
W10	White Truck G-T-B, 1½ Ton, 1910	4	19.00
W3	White Truck, 2 Ton, 1917 to 1920	4	21.00
O22	Willys-Knight, Model 20	10	5.50
O29	Willys-Knight, Model 20A, Late 1922-23	10	5.00
Y1	Yellow Cab J-K, Right	6	7.00
Y2	Yellow Cab J-K, Left	6	7.00
CH4	Yellow Cab L-M	6	7.30
Y3	Yellow Cab O	6	8.10
Y4	Yellow Cab A2, 1923, Small Shaft	6	8.10
Y5	Yellow Cab A2, Early 1923, Large Shaft	6	8.10

Truck Shafts

Code Number	Axle No. Tonnage	Each
C23	Clark 1D, 1 and 1½, 1920-21-22	12.00
E11	Eaton 1, Right	14.00
E12	Eaton 1, Left	14.00
S11	Sheldon W-1001, ½ to ¾	15.00
S12	Sheldon W-103, 1½ and 2 Taper and Hex, 59½ in. Track, 34⅝ in. over all	22.00
S7	Sheldon W-103, 1½ and 2 Taper and Hex, 62 in. Track, 35⅞ in. over all	22.00
S13	Sheldon W-102, 1½ and 2 Taper and Hex	22.00
S13X	Sheldon W-102, 1½ and 2 Taper and Hex, 62 in. Track	22.00
S14	Sheldon W-1501, 1 and 1½ Hex. Both Ends	20.00
S15	Sheldon W-1500, 1 and 1½ Taper and Hex	20.00
S16	Sheldon W-20, 2 Taper and Hex, Small Hex, 35½ in. over all	32.00
S16X	Sheldon, 2 Taper and Hex, Small Hex, 36⅝ in. over all	32.00
S6	Sheldon W-21, 2½ Taper and Hex, Large Hex	32.00
S24	Standard 1½	22.00
S10	Standard 3½	50.00
C23	Stewart Truck 10, 8-1 Ton, 9-1½ Ton, 1920-21	12.00
T8	Timken 6456, 1½, 6 Spline	20.00
T9	Timken 6460, 1½, 10 Spline	20.00
T12	Timken 6161, 2 Ton, 6 Spline	12.00
T3	Timken 6552, 1½ and 2, 6 Spline	12.00
T4	Timken 6560, 2 and 2½, 10 Spline	12.00
T5	Timken 6652, 3½, 6 Spline, 43¼ in. over all	18.00
T5X	Timken, ..., 3½, 6 Spline, 42⅛ in. over all	18.00
T10	Timken 6660, 3½, 10 Spline	18.00
T6	Timken 6752, 5 Ton, 6 Spline, O. S. Dia. Hub End, 2.495	27.00
T6X	Timken 6752, 5 Ton, 6 Spline, O. S. Dia. Hub End, 2.495	27.00
T7	Timken 6760, 5 Ton, 10 Spline	27.00
R1	Torbensen OX2, ½-¾ and 1 Torbensen OX2L	5.20 ....
R3	Torbensen A-B-C, 1-1½ and 2 Torbensen C-2, CE	6.00 ....
R5	Torbensen D-CT2, 2½	7.00
W5	Wisconsin 800G, 1½ Ton	20.00

NOTE. The axle number in the second column is the manufacturer's number which is stamped on top of the differential column.



These Valves are of the two-piece type with a cast iron head welded to an SAE 1020 steel stem. The James Valves conform in every respect to the specifications of the car manufacturers, and this type Valve is used on practically 90% of the car production. Every Valve is individually wrapped in special paper, dipped in a rust preventative, and packed 12 in a carton. They are guaranteed to be commercially perfect in design, materials and workmanship. Each Valve is machined to .001 of an inch, thus insuring absolute accuracy.

Furnished in either standard size or with $\frac{1}{64}$ inch oversize stem.

Alphabetical List—PASSENGER CARS

Stock No.	MAKE	MODEL	YEAR	MOTOR	No. Cyl.	List
J-79	Abbott	44	1916–18	Cont. 7W	6	$ .95
J-96	Ace	H. L.	1921	H. S. 11000	6	1.05
J-61	Alsace		1920–22	Lycoming K.	4	.80
J-81	American	A. B.	1916–20	Rutenber 25.	6	.95
J-96	American			H. S. 11000	6	1.05
J-79	American	Pan Amer.	1919–20	Cont. 7W	6	.95
J-81	American	Pan Amer.	1918–19	Rutenber 25.	6	.95
J-79	Anderson	200-400	1917–20	Cont. 7W	6	.95
J-80	Anderson	30	1920–22	Cont. 7R	6	1.00
J-63	Anderson	70	1919–22	Cont. 9N	6	1.00
J-79	Auburn	39	1917–20	Cont. 7W	6	.95
J-80	Auburn	39, 51	1920–22	Cont. 7R	6	1.00
J-81	Auburn		1917	Rutenber 25.	6	.95
J-63	Auburn	44	1918–22	Cont. 9N	6	1.00
J-79	Baker, R. & L.	25	1916–18	Cont. 7W	6	.95
J-79	Beggs	18T, 19T	1918–19	Cont. 7W	6	.95
J-80	Beggs	20T	1919–22	Cont. 7R	6	1.00
J-96	Bell	18	1921–22	H. S. 7000	4	1.05
J-104	Biddle			Buda WU	4	1.10
J-79	Birch	45, 45B	1919–20	Cont. 7W	6	.95
J-61	Birch	40	1920–22	Lycoming K.	4	.80
J-117	Birch	30, 30B	1918–22	LeRoi 2C	4	.95
J-96	Birch	44	1921–22	H. S. 7000	4	1.05
J-96	Birch	Light 6	1921–22	H. S. 11000	6	1.05
J-79	Bour-Davis	17, 17B, 18B	1916–19	Cont. 7W	6	.95
J-80	Bour-Davis	20	1920–22	Cont. 7R	6	1.00
J-63	Bour-Davis	21	1920–22	Cont. 9N	6	1.00
J-61	Bradley		1920–22	Lycoming K.	4	.80
J-94	Briscoe	24	1915–20	Own	4	.95
J-95	Briscoe	34	1920–22	Own	4	.95
J-77	Buick	B24, 25	1914	Own	4	.95
J-77	Buick	C24, 25	1915	Own	4	.95
J-77	Buick	D44, 5, 6, 7	1916–17	Own	6	.95
J-52	Buick, Intake	E44 to 9, 50	1918	Own	6	.95
J-52	Buick, Intake	H44 to 9, 50	1919	Own	6	.95
J-52	Buick, Intake	K44, to 9, 50	1920–21	Own	6	.95
J-52	Buick, Intake	44 to 9, 50	1921–23	Own	6	.95
J-53	Buick, Exhaust	E44, to 9, 50	1918	Own	6	.95
J-53	Buick, Exhaust	H44, to 9, 50	1919	Own	6	.95
J-53	Buick, Exhaust	K44, to 9, 50	1920–21	Own	6	.95
J-53	Buick, Exhaust	44 to 9, 50	1921	Own	6	.95
J-91	Buick	D34, 35, 37	1917	Own	4	.95
J-91	Buick	E34, 35, 37	1918	Own	4	.95
J-92	Buick	C36, 37, 54, 55	1915	Own	4	.95
J-92	Buick	D54, 55	1916	Own	6	.95
J-92	Buick	B55	1914–23	Own	6	.95
J-54	Buick, Intake	22 34 to 37	1921	Own	4	.95
J-55	Buick, Exhaust	22, 34 to 37	1921–23	Own	4	.95
J-55	Buick, Exhaust	22 34, 35, 36	1921–22	Own	4	.95
J-61	Bush	A, E	1921–22	Lycoming K.	4	.80
J-79	Bush		1916–20	Cont. 7W	6	.95
J-81	Bush	E, C	1921–22	Rutenber 25.	6	.95
J-157	Cadillac	55, 57 to 61	1917–22	Own	8	1.25
J-63	Case	U. V.	1918–22	Cont. 9N	6	1.00
J-132	Chalmers	Int. & Exh	1916–19		6	.95
J-133	Chalmers	Int.	1919–22		6	.95
J-96	Champion	S4	1920–22	H. S. 7000	4	1.05
J-61	Champion	C4	1919–22	Lycoming K.	4	.80
J-64	Chandler	All	1913–22	Own	6	.95
J-158	Chandler, All	Slotted	1913–18	Own	6	.95
J-58	Chevrolet	All	1913–23	Own	4	.55
J-68	Cleveland	40	1919–22	Own	6	.95
J-160	Cleveland	42	1924	Own	6	.95
J-96	Climber	K	1920–22	H. S. 7000	4	1.05
J-96	Climber		1921	H. S. 11000	6	1.05
J-159	Cole	50, 60, 70	1915–22	Own	8	1.00
J-83	Colonial, Slotted	35	1917	Falls	6	.95
J-79	Columbia		1917–20	Cont. 7W	6	.95
J-81	Columbia		1919–21	Rutenber 25.	6	.95
J-80	Columbia		1920–22	Cont. 7R	6	1.00
J-63	Comet	C53	1920–22	Cont. 9N	6	1.00
J-80	Comet	C53-2	1921–22	Cont. 7R	6	1.00
J-61	Commonwealth	40, 42	1918–22	Lycoming K.	4	.80
J-96	Commonwealth	44	1921	H. S. 7000	4	1.05
J-79	Crawford	40	1916–20	Cont. 7W	6	.95
J-63	Crawford	20-40	1919–22	Cont. 9N	6	1.00
J-61	Crow-Elkhart	K. C. E. L.	1917–22	Lycoming K.	4	.80
J-96	Crow-Elkhart	S55, 63, 65		H. S. 11000	6	1.05
J-81	Crow-Elkhart	H	1919–21	Rutenber 25.	6	.95
J-96	Curtis	45	1920–22	H. S. 7000	4	1.05
J-79	Davis	H. I. K.	1917–18	Cont. 7W		.95
J-80	Davis	51, 57, 61, 67	1920–22	Cont. 7R	6	1.00
J-63	Davis	J, I, M	1917–19	Cont. 9N	6	$ 1.00
J-131	Delco Light					.70
J-79	Detroiter	All	1916–18	Cont. 7W	6	.95
J-96	Dixie Flyer	H. S. 70	1919–22	H. S. 7000	4	1.05
J-51	Dodge	All	1915–23	Own	4	.75
J-61	Dort	8, 11, 15, 17, 19	1918–22	Lycoming K.	4	.80
J-100	Durant	4	1922–23	Own	4	.75
J-168	Durant	6	1921–23		6	.95
J-95	Earl	All	1922–23	Own	4	.95
J-79	Economy	45, 46	1918–20	Cont. 7W	6	.95
J-61	Elcar	D to H, K	1917–22	Lycoming K.	4	.80
J-79	Elcar	D, E, G, H	1918–19	Cont. 7W	6	.95
J-80	Elcar	D, G, H, K	1919–22	Cont. 7R	6	1.00
J-81	Elcar	Taxicab		Rutenber 25.	6	.95
J-82	Elgin, Grooved	All	1916–22	Falls	6	.95
J-83	Elgin, Slotted	All	1916–22	Falls	6	.95
J-79	Empire	70	1916–19	Cont. 7W	6	.95
J-70	Essex, Intake	All	1918–23	Own	4	1.00
J-71	Essex, Exhaust	All	1918–23	Own	4	1.00
J-63	Ferris	C20, 21	1920–22	Cont. 9N	6	1.00
J-142	Franklin	9B	1918–21	Own	6	.95
J-50	Ford	All	1912–22	Own	4	.40
J-61	Gardner	G	1920–22	Lycoming K.	4	.80
J-81	Geronimo	A45	1918–22	Rutenber 25.	6	.95
J-63	Geronimo			Cont. 9N	6	1.00
J-79	Ghent			Cont. 7W	6	.95
J-81	Ghent	45	1918	Rutenber 25.	6	.95
J-63	Ghent	60	1919–22	Cont. 9N	6	1.00
J-81	Glide	40	1916–22	Rutenber 25.	6	.95
J-82	Grant, Grooved	H, HY, K, G	1917–20	Falls	6	.95
J-83	Grant, Slotted	H, HY, K, G	1915–20	Falls	6	.95
J-61	Gray-Dort		1918–22	Lycoming K.	4	.80
J-127	Gray		1922–23		4	.70
J-79	Halladay		1919	Cont. 7W	6	.95
J-82	Halladay, Grooved		1918–19	Falls	6	.95
J-83	Halladay, Slotted		1918–19	Falls	6	.95
J-81	Halladay	21, 22, 23, 24	1919–22	Rutenber 25.	6	.95
J-61	Hamlin-Holmes		1920–22	Lycoming K.	4	.80
J-79	Hanson		1919	Cont. 7W	6	.95
J-80	Hanson	54, 54A	1919–22	Cont. 7R	6	1.00
J-79	Harvard	A	1920	Cont. 7W	6	.95
J-96	Harvard		1921–22	H. S. 7000	4	1.05
J-96	Hatfield	42	1920–22	H. S. 7000	4	1.05
J-97	Haynes	30, 3, 9, 45, 7	1915–22	Own	6	1.20
J-79	Highlander	All	1919–21	Cont. 7W	6	.95
J-96	Hilton		1921–22	H. S. 7000	4	1.05
J-79	Hollier	206, 207B	1919–20	Cont. 7W	6	.95
J-82	Hollier, Grooved		1917–18	Falls	6	.95
J-83	Hollier, Slotted		1917–18	Falls	6	.95
J-79	Huffman	W	1919	Cont. 7W	6	.95
J-80	Huffman		1919–23	Cont. 7R	6	1.00
J-79	Hudson	6-40	1914–16	Cont. 7W	6	.95
J-112	Hudson	37		Cont. C2	6	1.20
J-69	Hudson, Super	6	1917–23	Own	6	1.05
J-66	Hupmobile	R	1918–22	Own	4	.95
J-130	Hupmobile	N	1916–18	Own	4	.95
J-174	Hupmobile	R	1923	Own	4	.95
J-79	Jackson	38	1919	Cont. 7W	6	.95
J-80	Jackson	55	1919–22	Cont. 7R	6	1.00
J-61	Jackson	21	1921–22	Lycoming K.	4	.80
J-123	Jacquet			Wisc. UAU	4	2.10
J-88	Jewett	All	1922–23	Own	6	1.05
J-63	Jones	B28	1919–22	Cont. 9N	6	1.00
J-79	Jordan		1918–19	Cont. 7W	6	.95
J-63	Jordan	C	1918	Cont. 9N 10N	6	1.00
J-63	Jordan	B	1916–17	Cont. 7N	6	1.00
J-80	Jordan	M	1919–22	Cont. 7R	6	1.00
J-63	Jordan	P	1919–22	Cont. 9N	6	1.00
J-82	Kelsey, Grooved		1921–22	Falls	6	.95
J-83	Kelsey, Slotted		1921–22	Falls	6	.95
J-63	Kenworthy	55	1920–22	Cont. 9N	6	1.00
J-79	Kline	6-55K	1917–19	Cont. 7W	6	.95
J-80	Kline	J55	1919–22	Cont. 7R	6	1.00
J-96	Kurtz	A	1921	H. S. 11000	6	1.05
J-63	Leach	20	1920–22	Cont. 9N	6	1.00
J-117	LeRoi Motor	2C			4	.95
J-79	Lexington	R	1918–20	Cont. 7W	6	.95
J-80	Lexington	S	1919–22	Cont. 7R	6	1.00
J-79	Liberty	10A	1916–17	Cont. 9W	6	.95

Furnished in Standard or 1-64 Oversize Stem

James Motor Valves—Cont'd

Alphabetical List—PASSENGER CARS—(Continued)

Stock No.	MAKE	MODEL	YEAR	MOTOR	No Cyl.	List
J-140	Liberty	10C		Wisconsin	6	.95
J-154	Liberty	10B	1917–19	Cont. 7K	6	1.35
J-79	Liberty	10A	1916–17	Cont. 7W	6	.95
J-61	Lone Star	30	1920–22	Lycoming K.	4	.80
J-96	Lorraine	21T	1920–22	H. S. 7000	4	1.05
J-81	Madison		1916–21	Rutenber 25.	6	.95
J-82	Maibohm, Grooved	A, B	1917–22	Falls	6	.95
J-83	Maibohm, Slotted	A, B	1917–22	Falls	6	.95
J-81	Marion Handley	A	1916–17	Rutenber 25.	6	.95
J-63	Marion Handley	B	1919	Cont. 9N	6	1.00
J-161	Marmon	32	1912–14	Own	4	1.50
J-162	Marmon	34	1915–19	Own	6	1.75
J-175	Marmon	34	1920–24		4	1.50
J-61	Marshall	K	1920–22	Lycoming K.	4	.80
J-57	Maxwell	All	1915–23	Own	4	.55
J-81	Metz	Master Six	1919–22	Rutenber 25.	6	.95
J-79	Midland	A	1919	Cont. 7W	6	.95
J-84	Mitchell	All	1916–23	Own	6	.95
J-79	Monitor	M	1916–20	Cont. 7W	6	.95
J-80	Monitor	Series 3	1919–22	Cont. 7R	6	1.00
J-141	Monroe			Own	4	.95
J-79	Moon	30-43	1916–17	Cont. 7W	6	.95
J-79	Moon	45-46	1916–20	Cont. 7W	6	.95
J-63	Moon	40	1915	Cont. 6N	6	1.00
J-63	Moon	48, 66, 68	1917–22	Cont. 9N	6	1.00
J-80	Moon	48 Victory	1919–22	Cont. 7R	6	1.00
J-81	Moore	All	1919–20	Rutenber 25.	6	.95
J-61	Napoleon	30	1917	Lycoming K.	4	.80
J-79	Napoleon	All	1918–20	Cont. 7W	6	.95
J-67	Nash	681 to 7	1919–22	Own	6	1.10
J-68	Nash	41 to 5	1920–22	Own	4	1.10
J-155	Nash	681-Short	1918–19	Own	6	1.10
J-63	National	A, F	1918	Cont. 7N	6	1.00
J-63	National	A, L	1920–22	Cont. 1N	6	1.00
J-85	National		1916–17	Cont. 6H	6	1.15
J-79	Noma	A, B	1918–19	Cont. 7W	6	.95
J-80	Noma	C	1919–22	Cont. 7R	6	1.00
J-61	Norwalk	18-40	1919–20	Lycoming K.	4	.80
J-72	Oakland	32, 32B, 34, 34B, 34C	1916–22	Northway	6	.90
J-145	Olds	45A-B-46	1918–21	Northway 209	8	.95
J-152	Olds	42	1914–15		4	.95
J-73	Oldsmobile	44 to 46	1917–22	Northway 209	8	.55
J-58	Oldsmobile	43A	1921–22	Chevrolet	4	.55
J-72	Oldsmobile	37, 37A, 37B	1917–21	Northway	6	.90
J-93	Overland	75A, B	1916–18	Own	4	1.50
J-89	Overland	83B, 85-4	1917–18	Own	4	1.15
J-79	Overland	85-6	1916–18	Cont. 7W	6	.95
J-63	Overland	88-6	1921	Cont. 9N	6	1.00
J-90	Overland	90A, B	1918–20	Own	4	.95
J-85	Overland	82	1915–16	Cont. 6H	6	1.15
J-56	Overland	4	1919–23	Own	4	.55
J-178	Overland	92	1923–24	Own 4		.55
J-163	Packard	Single Six	1920–21	Own	6	1.35
J-164	Packard	Twin Six	1916–21	Own	12	1.45
J-74	Paige	6-66	1921–22	Own	6	1.05
J-85	Paige	46, 51	1914–15	Cont. 6H	6	1.15
J-63	Paige	51, 55	1917–18	Cont. 9N	6	1.00
J-81	Paige	38, 39, 40	1916–19	Rutenber 25.	6	.95
J-62	Paige	42, 44	1920–22	Own	6	.95
J-63	Paige	6-55	1917–20	Cont. 9N	6	1.00
J-81	Pan American	G-5	1918–19	Rutenber 25.	6	.95
J-96	Pan American	E, F, 6-55		H. S. 11000	6	1.05
J-63	Pan American	J7	1918	Cont. 9N	6	1.00
J-79	Pan American		1919–20	Cont. 7W	6	.95
J-79	Paterson	45, 6, 7, 8, 9	1916–20	Cont. 7W	6	.95
J-80	Paterson	50	1919–22	Cont. 7R	6	1.00
J-79	Pathfinder			Cont. 7W	6	.95
J-63	Pathfinder			Cont. 9N	6	1.00
J-61	Pennsy		1916–17	Lycoming K.	4	.80
J-79	Pennsy	All	1918	Cont. 7W	6	.95
J-61	Piedmont	30	1917–22	Lycoming K.	4	.80
J-79	Piedmont	40, 49	1917–20	Cont. 7W	6	.95
J-96	Pilot	6-50	1921	H. S. 11000	6	1.05
J-82	Premocar, Grooved	6-40	1921–22	Falls	6	.95
J-83	Premocar, Slotted	6-40	1921–22	Falls	6	.95
J-61	Pyramid	R	1921–22	Lycoming K.	4	.80
J-96	Raleigh	A-60		H. S. 11000	6	1.05
J-75	Reo, Exh.	F, T	1918–22	Own		.95
J-75	Reo, Exh.	T, U, J, T	1918–19	Own		.95
J-75	Reo, Exh.	M, N, T	1915–17	Own		.95
J-126	Reo, Intake	F, T	1918–22	Own		1.10
J-126	Reo, Intake	T, U, J, T	1918–19	Own		1.10
J-126	Reo, Intake	M, N, T	1915–17	Own		1.10
J-76	Reo, Exh.	R, S, J, R	1910–17	Own		.95
J-76	Reo, Exh.	M, N, R	1915–16	Own		.95
J-76	Reo, Exh.	F, R	1915–16	Own		.95
J-128	Reo, Intake	R, S, J, R	1910–17	Own		.95
J-128	Reo, Intake	M, N, R	1915–16	Own		.95
J-128	Reo, Intake	F, R	1915–16	Own		.95
J-125	Reo, Exh.	T6, U6, T6	1919–22	Own		.95
J-129	Reo, Intake	T6, U6, T6	1919–22	Own		1.10
J-165	Rickenbacker		1922–23	Own		.95
J-63	Roamer	6-54E	1919–22	Cont. 9N	4	1.00
J-81	Roamer		1916–17	Rutenber 25.	4	.95
J-124	Rollin		1924	Own	4	.95
J-81	Sawyer	All		Rutenber 25.	6	.95
J-79	Sayers	P, AP, BP, CP	1917–20	Cont. 7W	6	.95
J-80	Sayers		1919–22	Cont. 7R	6	1.00
J-72	Scripps-Booth	39, 40, 41, 42	1918–21	Northway 111	6	.90
J-72	Scripps-Booth	A-41, 42	1919	Northway 111	6	.90
J-72	Scripps-Booth	B39, 40, 42	1919–21	Northway 111	6	.90
J-80	Scripps-Booth	F	1921–22	Cont. 7R	6	1.00
J-58	Scripps-Booth	G	1917–19	Chevrolet	4	.55
J-117	Seneca	All	1918–22	LeRoi 2C	4	.95
J-63	Severin	Six	1920–22	Cont. 9N	6	1.00
J-58	Sheridan	B-40	1920–21	Chevrolet	4	.55
J-61	Skeldon	35	1920–22	Lycoming K.	4	.80
J-80	Stanwood	A	1920–22	Cont. 7R	6	1.00
J-156	Star	All	1922–23			.70
J-96	Sterling	B	1921–22	H. S. 7000	4	1.05
J-61	Sterling	A	1921–22	Lycoming K.	4	.80
J-117	Sterling	A	1921–22	LeRoi 2C	4	.95
J-134	Stevens	Salient Six			6	1.00
J-101	Studebaker	Lt. Six	1923–24	Own	6	.95
J-60	Studebaker	Light Six	1921–22	Own	6	.95
J-59	Studebaker	Light Six	1919–20	Own	6	.95
J-59	Studebaker	Special Six	1919–24	Own	6	.95
J-59	Studebaker	Big Six	1917–23	Own	6	.95
J-98	Studebaker	4-40	1916–18	Own	4	.95
J-98	Studebaker	6-50	1916–18	Own	6	.95
J-79	Sun			Cont. 7W	6	.95
J-79	Supreme	All		Cont. 7W	6	.95
J-61	Texan	A38, B38	1918–22	Lycoming K.	4	.80
J-79	Thorobred	Lexington R	1918–20	Cont. 7W	6	.95
J-79	Triangle	A	1917–18	Cont. 7W	6	.95
J-117	Triangle	D	1917–18	LeRoi 2C	4	.95
J-61	Tulsa	D	1918–19	Lycoming K.	4	.80
J-96	Tulsa	E	1920–22	H. S. 7000	4	1.05
J-63	Velie	39	1919–22	Cont. 9N	6	1.00
J-63	Velie	14, 15	1915–16	Cont. 6N	6	1.00
J-79	Velie	22, 27, 28, 30	1916–19	Cont. 7W	6	.95
J-82	Velie, Grooved	34	1920–22	Falls	6	.95
J-83	Velie, Slotted	34	1920–22	Falls	6	.95
J-80	Velie	48	1919–22	Cont. 7R	6	1.00
J-86	Velie	58	1921–22	Own	6	.95
J-63	Vogue	66	1920–22	Cont. 9N	6	1.00
J-96	Vogue	55	1921	H. S. 11000	6	1.05
J-82	Washington, Grooved		1920–22	Falls	6	.95
J-83	Washington, Slotted		1920–22	Falls	6	.95
J-79	Westcott	41, 17, S18, A38	1916–19	Cont. 7W	6	.95
J-80	Westcott	B30, B38, C38	1919–22	Cont. 7R	6	1.00
J-63	Westcott	18A, A48, C48	1919–22	Cont. 9N	6	1.00
J-63	Westcott	42, 51	1916	Cont. 9N	6	1.00
J-96	Winther	61	1921	H. S. 11000	6	1.05
J-109	Yellow Cab	Taxi Cab		Cont. N	4	1.00

Alphabetical List—TRUCKS

Stock No.	MAKE	MODEL	CAPACITY	MOTOR	List
J-118	Acason	R, RB	1½ Ton	Waukesha BUX	1.55
J-120	Acason	M	5 Ton	Waukesha PU7	1.50
J-144	Acason	HL	2½ and 3½ Ton	Waukesha CU	1.45
J-119	Acason	L	2½ Ton	Waukesha DU	1.55
J-119	Acason	M	5 Ton	Waukesha EU	1.55
J-104	Ace	C	1½ Ton	Buda WU	1.10
J-102	Ace	A	2½ and 3 Ton	Buda HU	1.20
J-99	Acme	30	1 and 1½ Ton	Continental J4	1.15
J-99	Acme	40	1½ and 2 Ton	Continental J4	1.15
J-113	Acme	E	5 Ton	Continental B2	1.55
J-109	Acme	G, B, F	¾, 1 and 1½ Ton	Continental N	1.00
J-110	Acme	A	2 Ton	Continental C4	1.35
J-108	Acme	C	3½ Ton	Continental E4	1.50
J-114	Acme	90	3½ and 4½ Ton	Continental L4	1.35
J-123	Aetna		1½ Ton	Wisc. UAU	2.10
J-123	Aetna		3½ Ton	Wisc. VAU	2.10
J-123	Aetna		2½ Ton	Wisc. VAU	2.10
J-121	Aetna		5½ Ton	Wisc. RBU	1.75
J-166	Akron	1921	1 Ton	Hinkley HAA	1.20
J-96	All American		1, 1½ and 2 Ton	H. S. 7000	1.05
J-114	All Power		3½ Ton	Continental L4	1.35
J-61	A. M. C.		¾ and 1½ Ton	Lycoming K	.80
J-61	Apex	G	1 Ton	Lycoming K	.85
J-104	Apex	CD	1 and 1½ Ton	Buda RU	1.10
J-102	Apex	E	2½ Ton	Buda HU	1.20
J-108	Armleder	KW	3½ Ton	Continental E4	1.50
J-110	Armleder	HW	2½ Ton	Continental C4	1.35
J-176	Armleder	KW, B	3½ Ton	BU YTU	1.60
J-61	Atco	W-20	¾ Ton	Lycoming K	.80
J-61	Atlas	18, 21	¾ and 1 Ton	Lycoming	.80
J-99	Atterbury	20R	1½ and 2 Ton	Continental J4	1.15
J-113	Atterbury	8E	5 Ton	Continental B2	1.55
J-110	Atterbury	7 CX	1½ Ton	Continental C4	1.35
J-108	Atterbury	7D	3½ Ton	Continental E4	1.50
J-99	Atterbury	20R	1 and 1½ Ton	Continental J4	1.15
J-113	Available	H5	5 Ton	Continental B2	1.55
J-119	Available	H7	7 Ton	Waukesha EU	1.55
J-110	Available	H2, H2½	2 and 2½ Ton	Continental C4	1.35
J-108	Available	H3½	3½ Ton	Continental E4	1.50
J-109	Beck	A, B	1½ and 2 Ton	Continental N	1.00
J-110	Beck	C	2½ Ton	Continental C4	1.35
J-108	Beck	D	3½ Ton	Continental E4	1.50
J-106	Bell		1½ Ton	Buda CTU	1.20
J-102	Bell		2½ Ton	Buda HU	1.20
J-104	Bell		1½ Ton	Buda RU	1.10
J-102	Belmont	C	2 Ton	Buda HU	1.20
J-111	Bessemer	H2	1 and 1½ Ton	Continental N3¾	1.15
J-109	Bessemer	G	1 Ton	Cont. N. 3½	1.00
J-112	Bessemer	J2	2½ Ton	Continental C2	1.20
J-108	Bessemer	K2	4 Ton	Continental E4	1.50
J-104	Bridgeport	A	1½ Ton	Buda WU	1.10
J-102	Bridgeport	2½B	2½ Ton	Buda HTU	1.20
J-113	Brockway	T5	5 Ton	Continental B2	1.55

Furnished in Standard or 1-64 Oversize Stem

James Motor Valves—Cont'd

Alphabetical List—TRUCKS—(Continued)

Stock No.	MAKE	MODEL	CAPACITY	MOTOR	List
J-112	Brockway	K4	2½ Ton	Continental C2..	1.20
J-109	Brockway	S2	1½ Ton	Continental N...	1.00
J-108	Brockway	R2, R4	3½ Ton	Continental E4..	1.50
J-61	Buffalo		2 Ton	Lycoming K.....	.80
J-123	Capitol	M3	3½ Ton	Wisc. UAU	2.10
J-61	Champion	40	¾ Ton	Lycoming K.....	.80
J-96	Champion		1,200 Lbs	H. S. 7000.....	1.05
J-58	Chevrolet	A, G, T	¾ and 1 Ton	Chevrolet.....	.55
J-96	Climber	A	1½ Ton	H. S. 7000.....	1.05
J-176	Clinton	90	3½ and 4 Ton	BU YTU.....	1.60
J-113	Clydesdale	120 B. C	5 Ton	Continental B2..	1.55
J-109	Clydesdale	32X, 42	1 and 1½ Ton	Continental N...	1.00
J-110	Clydesdale	65X	2 and 2½ Ton	Continental C4..	1.35
J-108	Clydesdale	90, Old	3½ and 5 Ton	Continental E4..	1.50
J-61	Collier		½, ¾ and 1¼ Ton	Lycoming K.....	.80
J-110	Collier	20, 22	2 and 2½ Ton	Continental C4..	1.35
J-109	Collier	18, 19	1 and 1½ Ton	Continental N...	1.00
J-109	Columbia	F	1 Ton	Continental N...	1.00
J-61	Comet	I-T-2	1 and 1½ Ton	Lycoming K.....	.80
J-99	Commerce	14	1½ Ton	Continental J4..	1.15
J-109	Commerce	E, EP, T, 12 & 161	1½ and 2 Ton	Continental N...	1.00
J-61	Conestoga		1½ Ton	Lycoming K.....	.80
J-100	Conestoga	12, 20, 30	¾, 1 and 1½ Ton	Continental N...	1.00
J-99	Corbitt	D	1½ Ton	Continental J4..	1.15
J-113	Corbitt	AA	5 Ton	Continental B2..	1.55
J-111	Corbitt	E1, D	1 and 1½ Ton	Continental N3¾	1.15
J-110	Corbitt	C, B	2 and 2½ Ton	Continental C4..	1.35
J-108	Corbitt	A	3½ Ton	Continental E4..	1.50
J-117	Corliss	A	¾ Ton	LeRoi 2C.....	.95
J-96	Cyclone	A	1½ Ton	H. S. 7000.....	1.05
J-104	Dart	S	1½ Ton	Buda WU.....	1.10
J-102	Dart	M	2½ Ton	Buda HU.....	1.20
J-99	Day-Elder	B, N	2 Ton	Continental J4..	1.15
J-117	Day Elder	J	¾ Ton	LeRoi 2C.....	.95
J-109	Day Elder	A, B	1-1½ and 1½-2	Continental N...	1.00
J-110	Day Elder	D	2 Ton	Continental C4..	1.35
J-108	Day Elder	F	3½ Ton	Continental E4..	1.50
J-176	Day-Elder	E, N	5 and 6 Ton	BU YTU.....	1.60
J-104	Dearborn	48	2 Ton	Buda WU.....	1.10
J-104	Dearborn	BW	2 Ton	Buda RU.....	1.10
J-104	Dearborn	F	1½ Ton	Buda WU.....	1.10
J-109	Dearborn	F	1½ Ton	Continental N...	1.00
J-110	DeKalb	E2, E2½	2 and 2½ Ton	Continental C4..	1.35
J-99	Denby	33	2 Ton	Continental J4..	1.15
J-117	Denby	1916	¾ Ton	LeRoi 2C.....	.95
J-108	Denby	27 and 210	4 and 5 Ton	Continental E4..	1.50
J-112	Denby	25, C2	2½ and 3 Ton	Continental C2..	1.20
J-109	Denby	12, 33, 134	1, 1½ and 2 Ton	Continental N...	1.00
J-96	Dependable	A	1 Ton	H. S. 7000.....	1.05
J-106	Dependable	C	1½ Ton	Buda CTU.....	1.20
J-102	Dependable	E	2½ Ton	Buda HTU.....	1.20
J-113	Diamond T	S	5 Ton	Continental B2..	1.55
J-108	Diamond T	LB	3½ Ton	Continental E4..	1.50
J-109	Diehl	A	1 Ton	Continental N...	1.00
J-96	Diehl	B		H. S. 7000.....	1.05
J-51	Dodge	DB	1 Ton	Dodge.....	.75
J-102	Double-Drive	C, and B	1½ and 3 Ton	Buda HTU.....	1.20
J-102	Double-Drive	B	4 Ton	Buda HTU.....	1.20
J-106	Eagle		2 Ton	Buda CTU.....	1.20
J-117	Elmira	C	¾ Ton	LeRoi 2C.....	.95
J-110	Erie		2½ Ton	Continental C4..	1.35
J-108	Erie		3½ Ton	Continental E4..	1.50
J-61	Fageol		1½ Ton	Lycoming K.....	.80
J-119	Fageol		3½-5 Ton	Waukesha DU...	1.55
J-109	Famous	B10, B12	1 and 1½ Ton	Continental N...	1.00
J-109	Fargo	P, R	2 Ton	Continental N...	1.00
J-99	Federal	R-2	1 Ton	Continental J4..	1.15
J-99	Federal	S-23	1½ Ton	Continental J4..	1.15
J-111	Federal	SD	1 Ton	Continental N3¾	1.15
J-108	Federal	WD, WE, WC	3½ and 5 Ton	Continental E4..	1.50
J-110	Federal	J, K, M, UE, O, P, UC, UD	1½ and 2 Ton	Continental C4..	1.35
J-113	Federal	XE	5 Ton	Continental B2..	1.55
J-108	Federal	L	3½ Ton	Continental E4.	1.50
J-114	Federal	W2	3½ and 4 Ton	Continental L4.	1.35
J-113	Federal	X2	6 Ton	Continental B2..	1.55
J-106	Forest Drive	C	1½ Ton	Buda CTU.....	1.20
J-50	Ford	T	1 Ton	Own.....	.40
J-117	Forschler	S	¾ Ton	LeRoi 2C.....	.95
J-109	Forschler	A, AX	1 and 1½ Ton	Continental N...	1.00
J-110	Forschler	B, BX, AT	2 and 3 Ton	Continental C4..	1.35
J-96	Frontmobile	FM	1½ Ton	H. S. 7000.....	1.05
J-96	Fulton	A, C	¾ and 2 Ton	H. S. 7000.....	1.05
J-123	Garford	77B	3½ Ton	Wisc. UU	2.10
J-176	Garford	80	4 Ton	BU YTU.....	1.60
J-104	Gary	F	1 Ton	Buda WU.....	1.10
J-102	Gary	J	2½ Ton	Buda HTU.....	1.20
J-102	Gary	H	2 Ton	Buda HU.....	1.20
J-176	Gary	JO-K	2½ and 3½ Ton	BU YTU.....	1.60
J-102	Gersix	K	2½ Ton	Buda HU.....	1.20
J-109	Giant	15A, 14	1 and 1½ Ton	Continental N...	1.00
J-110	Giant	16	2 Ton	Continental C4..	1.35
J-176	Gotfredson	80	4 Ton	BU YTU.....	1.60
J-109	G. M. C	15	¾ Ton	Continental N..	1.00
J-109	G. M. C	21	1 Ton	Continental N..	1.00
J-112	G. M. C	41A	2 Ton	Continental C2.	1.20
J-109	G. M. C	16, 31	¾, 1 and 1½ Ton	Continental N...	1.00
J-108	G. M. C	71A and 101A	3½ and 5 Ton	Continental E4..	1.50
J-177	G. M. C	K 41	2 Ton	Own.....	2.00
J-51	Graham Bros		1-1½ Ton	Dodge.....	.75
J-113	Gramm-Berns	50	5 Ton	Continental B2..	1.55
J-112	Gramm-Berns	20	2 Ton	Continental C2..	1.20
J-109	Gramm-Berns	65, 15, 15W	1 and 1½ Ton	Continental N...	1.00
J-109	Grant	10, 17, 15	1½ and 2 Ton	Continental N...	1.00
J-108	Grant	17	3½ Ton	Continental E4.	1.50
J-113	Hahn		5 Ton	Continental B2..	1.55
J-109	Hahn	C	1 Ton	Continental N..	1.00
J-108	Hahn	E	2½ and 3½ Ton	Continental E4..	1.50
J-111	Hall	Dispatch	1½ Ton	Cont. N 3¾	1.15
J-110	Hall		2 Ton	Continental C4..	1.35
J-108	Hall		3½ and 5 Ton	Continental E4..	1.50
J-176	Harvey	W. H. B	3½ Ton	BU YTU.....	1.60
J-176	Harvey	W. H. T	10	BU YTU.....	1.60
J-119	Hendrickson	K	5 Ton	WaukeshaEU...	1.55
J-102	Hendrickson	I	2½ Ton	Buda HTU.....	1.20
J-102	Hendrickson	J	3½ Ton	Buda HTU.....	1.20
J-176	Hendrickson	P	3½ Ton	BU YTU.....	1.60
J-102	Hewitt Ludlow		2 Ton	Buda HTU.....	1.20
J-102	Hewitt Ludlow		2½ Ton	Buda HTU.....	1.20
J-102	Hewitt Ludlow		3½ Ton	Buda HU.....	1.20
J-102	Hewitt Ludlow	Tractor	5 Ton	Buda HU.....	1.20
J-111	Higrade	A18	1 Ton	Cont. N 3¾	1.15
J-109	Hoover	15B, 20A	1 and 1½ Ton	Continental N...	1.00
J-109	Huffman	B	1½ Ton	Continental N...	1.00
J-106	Huron	Erie	1½ Ton	Buda CTU.....	1.20
J-109	Independent	(Iowa)	1½ Ton	Continental N...	1.00
J-110	Independent	(Iowa) F	2 Ton	Continental C4..	1.35
J-109	Independent	(Ohio)	1 Ton	Continental N...	1.00
J-110	Independent	(Ohio) G, HX	2 Ton	Continental C4..	1.35
J-119	Indiana	51	5 Ton	Waukesha EU...	1.55
J-61	International	S-60	¾ Ton	Lycoming K.....	.80
J-108	Jackson	C 1920	3½ Ton	Continental E4..	1.50
J-109	Jones	31A	1 Ton	Continental N...	1.00
J-106	Jumbo	15	1½ Ton	Buda CTU.....	1.20
J-106	Jumbo	20	2 Ton	Buda CTU.....	1.20
J-102	Jumbo	25D	2½ Ton	Buda HU.....	1.20
J-102	Jumbo	30	3 Ton	Buda HU.....	1.20
J-111	Kalamazoo	G	1½ Ton	ContinentalN3¾	1.15
J-123	Kalamazoo	H	2½ Ton	Wisc. TAU	2.10
J-123	Kalamazoo	K	3½ Ton	Wisc. UAU	2.10
J-63	Kankakee	E, EP	2½ Ton	Continental 9N..	1.00
J-96	Kearns	H, N	¾ and 1½ Ton	H. S. 7000.....	1.05
J-123	Kimball	B, 4 A	2 Ton	Wisc. TU	2.10
J-123	Kimball	C, 6, A	2½ Ton	Wisc. UU	2.10
J-108	Kleiber	AA, A, BB	1, 1½ & 2 Ton	Continental C4..	1.35
J-108	Kleiber	B, C	2½ and 3½ Ton	Continental E4..	1.50
J-96	Koehler	C, D	1¼ and 1½ Ton	H. S. 7000.....	1.05
J-110	K-Z		2½ Ton	Continental C4..	1.35
J-111	K-Z		1½ Ton	Continental N3¾	1.15
J-110	K-Z		1½ Ton	Cont. N 3¾	1.15
J-117	LaFayette		¾ Ton	LeRoi 2C.....	.95
J-110	Lange	B	2½ Ton	Continental C4..	1.35
J-113	Larrabee	W	5 Ton	Continental B2..	1.55
J-109	Larrabee	U	1½ Ton	Continental N...	1.00
J-110	Larrabee	SK	2½ Ton	Continental C4..	1.35
J-108	Larrabee	SL, T	3½ and 5 Ton	Continental E4..	1.50
J-99	Larrabee	J-4	1½ and 2½ Ton	Continental J4..	11.5
J-112	LMC	2-20	2½ Ton	Continental C2..	1.20
J-117	Loyal		¾ Ton	LeRoi 2C.....	.95
J-96	Luverne	E	1½ Ton	H. S. 7000.....	1.05
J-108	Maccar	H, M	2½ and 3½ Ton	Continental E4..	1.50
J-176	MacDonald	A	7½ Ton	BU YTU.....	1.60
J-150	Mack	A. C. Intake	3½-5 Ton	Own.....	2.25
J-151	Mack	A. C. Exhaust	3½-5 Ton	Own.....	2.25
J-83	Maibohm		¾ Ton	Falls.....	.95
J-61	Marshall		¾ Ton	Lycoming K.....	.80
J-102	Master	D	2½ Ton	Buda HU.....	1.20
J-102	Master	W	2½ Ton	Buda HU.....	1.20
J-102	Master	D	2 Ton	Buda HO.....	1.20
J-102	Master	M-O-W	2 Ton	Buda HU.....	1.20
J-102	Master	W-L-T	2½ Ton	Buda HU.....	1.20
J-176	Master	51-61	3½ and 5 Ton	BU YTU.....	1.60
J-109	Menominee	Hurryton	1 Ton	Continental N...	1.00
J-110	Menominee	H, D	1½ and 2 Ton	Continental C4..	1.35
J-108	Menominee	G	3½ Ton	Continental E4..	1.50
J-113	Menominee	J	5 Ton	Continental B2..	1.55
J-102	Midland	MT	2 Ton	Buda HU.....	1.20
J-102	Midland	S	2½ Ton	Buda HU.....	1.20
J-113	Moreland	19G, 20G, 19V 20J, 22H	4 and 5 Ton	Continental B2..	1.55
J-108	Moreland	19C, 21C	2½ Ton	Continental E4..	1.50
J-110	Muskegon	20C	2 Ton	Continental C4..	1.35
J-123	Mutual	2A	2 Ton	Wisc. TAU	2.10
J-61	Myers	55, 60, 75, 80..	1 and 1½ Ton	Lycoming K.....	.80
J-96	Napoleon	7	¾ Ton	H. S. 7000.....	1.05
J-102	Nash Quad	4017	2 Ton	Buda HU.....	1.20
J-113	Nelson-LeMoon	F5	5 Ton	Continental B2..	1.55
J-110	Nelson-LeMoon	F1½, F2½	1½ and 2½ Ton	Continental C4..	1.35
J-108	Nelson-LeMoon	F3½	3½ Ton	Continental E4..	1.50
J-110	Netco	D	2 Ton	Continental C4..	1.35
J-108	Netco	H	2½ Ton	Continental E4..	1.50
J-110	Niles	E	2 Ton	Continental C4..	1.35
J-108	Noble	MW4	4 Ton	Continental E4..	1.50
J-61	Noble	A21	1 Ton	Lycoming K.....	.80
J-176	Noble	E-71	3½ and 5 Ton	BU YTU.....	1.60
J-61	Norwalk	25E, 35E	1 and 1½ Ton	Lycoming K.....	.80
J-109	Ogden	A1	1 Ton	Continental N...	1.00
J-112	Ogden	C2	2½ Ton	Continental C2..	1.20
J-102	O. K	L	2½ Ton	Buda HTU.....	1.20
J-109	Old Hickory	W	1 Ton	Continental N...	1.00
J-61	Old Hickory	N	1½ Ton	Lycoming K.....	.80
J-119	Old Reliable	K, L, M	7 Ton	Waukesha EU...	1.55
J-123	Old Reliable	A, B	2½ Ton	Wisc. UAU	2.10
J-123	Old Reliable	C	3½ Ton	Wisc. UAU	2.10
J-123	Old Reliable		5 Ton	Wisc. UAU	2.10
J-58	Oldsmobile	Economy T	1 Ton	Chevrolet.....	.55
J-110	Olympic			Continental C4..	1.35
J-96	Oshkosh	A	2 Ton	H. S. 7000.....	1.05
J-170	Packard, Intake	AE, F, 4E, 3E, 4½E, 5E, 6E	3, 4, 4½ Ton	Own 4.....	2.75
J-171	Packard Exh	AE, F, 4E, 3E, 4½ E, 5E, 6E	3, 4, 4½ Ton	Own 4.....	2.75
J-172	Packard, Int	1E, 1½E, 2E	1 and 1½ Ton		2.75
J-173	Packard, Exh	1E, 1½E, 2E	1 and 1½ Ton		2.75
J-109	Palmer		1 Ton	Continental N...	1.00
J-110	Palmer		2 Ton	Continental C4..	1.35
J-113	Parker	MO	5 Ton	Continental B2..	1.55
J-123	Parker	F20	2 Ton	Wisc. TAU	2.10

Furnished in Standard or 1-64 Oversize Stem

James Motor Valves—Cont'd

Alphabetical List—TRUCKS—(Continued)

Stock No.	MAKE	MODEL	CAPACITY	MOTOR	List
J-111	Patriot	Revere	¾-1½ Ton	Continental N3¾	1.15
J-61	Piedmont	H-30	1½ Ton	Lycoming K	.80
J-147	Pierce-Arrow	X5	2 Ton	Own	2.25
J-148	Pierce-Arrow	R1-R9	5 Ton	Own	2.25
J-149	Pierce-Arrow	X3-X4	2 Ton	Own	2.25
J-110	Pioneer, All Star	F	2 Ton	Continental C4	1.35
J-110	Pittsburgh	B	2½ Ton	Continental C4	1.35
J-110	Power	B	2 Ton	Continental C4	1.35
J-61	Premocar	B143	1½ Ton	Lycoming K	.80
J-99	Rainier	R-36	1½ Ton	Continental J4	1.15
J-113	Rainier	R17	5 Ton	Continental B2	1.50
J-109	Rainier	R11, R9 R6, R8¾, 1, 1½ & 2 Ton		Continental N	1.05
J-99	Republic	11-X	2 Ton	Continental J4	1.15
J-108	Republic	20, 20A, 20B	3½ Ton	Continental E4	1.50
J-112	Republic	19, 19A, 19B	2, 2½ Ton	Continental C2	1.20
J-109	Republic	10, 10E	1 Ton	Continental N	1.00
J-109	Republic	11, 11X	1½ Ton	Continental N	1.00
J-96	Ruggles	2	1 Ton	Hers. Spellman	1.05
J-109	Ruggles	3	1 Ton	Continental N	1.00
J-169	Riker	B	3 Ton	1918-22, 4 Cyl	1.80
J-169	Riker	BB	4 Ton	1918-22, 4 Cyl	1.80
J-123	Rowe	HW	4 Ton	Wisc. TAU	2.10
J-123	Royal	2, 2½, 3½ Ton		Wisc. TAU	2.10
J-58	Samson		¾ and 1¼ Ton	Chevrolet	.55
J-111	Sandow	G. G. G.	1, 1½ and 2 Ton	Cont. N 3¾	1.15
J-110	Sandow	J	2½ Ton	Continental C4	1.35
J-108	Sandow	M, L	3½ and 5 Ton	Continental E4	1.50
J-110	Sanford	W25	2½ Ton	Continental C4	1.35
J-108	Sanford	W35 and W50	3½ and 5 Ton	Continental E4	1.50
J-102	Schacht		2½ Ton	Buda HU	1.20
J-111	Schwartz	B2	1½ Ton	Continental N3¾	1.15
J-61	Schwartz	A	1 Ton	Lycoming K	.80
J-99	Selden	30-C	1½ Ton	Continental J4	1.15
J-117	Selden	G	¾ Ton	LeRoi 2C	.95
J-113	Selden	5A	5 Ton	Continental B2	1.55
J-109	Selden	Special (1½A)	1½ Ton	Continental N	1.00
J-110	Selden	2½ A	2½ Ton	Continental C4	1.35
J-108	Selden	3½A	3½ Ton	Continental E4	1.50
J-117	Seneca	F, L2, M20	¾ Ton	LeRoi 2C	.95
J-102	Service	31	1½ Ton	Buda IU	1.20
J-102	Service	36	1½ Ton	Buda HU	1.20
J-102	Service	51	2½ Ton	Buda HU	1.20
J-102	Service	71	3½ Ton	Buda HU	1.20
J-110	Shaw	M3	2 Ton	Continental C4	1.35
J-109	Shaw	M4	1 Ton	Continental N	1.00
J-99	Signal	N. F.	1¾ Ton	Continental J4	1.15
J-113	Signal	R	5 Ton	Continental B2	1.55
J-110	Signal	F. H. J	1, 1½ and 2 Ton	Continental C4	1.35
J-114	Signal	M	5 Ton	Contintal L4	1.35
J-108	Signal	M	3½ Ton	Continental E4	1.50
J-104	Southern	10	1 Ton	Buda RU	1.10
J-102	Southern	20	2 Ton	Buda ITU	1.20
J-61	Southern		1 and 1½ Ton	Lycoming K	.80
J-109	Southern	15	1½ Ton	Continental N	1.00
J-112	Standard	76	2 Ton	Continental C2	1.20
J-109	Standard	56, 1K	1 Ton	Continental N	1.00
J-113	Standard	5K	5 Ton	Continental B2	1.55
J-114	Standard	3½K	3½ Ton	Continental L4	1.35
J-119	Sterling		3½ Ton	Waukesha DU	1.55
J-119	Sterling		5 and 7½ Ton	Waukesha EU	1.55
J-144	Sterling	A	1½, 2, 2½ Ton	Waukesha CU, FU	1.45
J-117	Stewart	6, 11	¾ Ton	LeRoi 2C	.95
J-111	Stewart	8, 9	1 and 1½ Ton	Continental N3¾	1.15
J-110	Stewart	7	2 Ton	Continental C4	1.35
J-96	Stewart	12	1 Ton	H. S. 7000	1.05
J-108	Stewart	10	3½ Ton	Continental E4	1.50
J-176	Stewart	10-X	3½ and 4 Ton	BU YTU	1.60
J-110	Success	B	2½ Ton	Continental C4	1.35
J-102	Sullivan	E	2 Ton	Buda HTU	1.20
J-112	Superior	E	2 Ton	Continental C2	1.20
J-109	Superior	D	1 Ton	Continental N	1.00
J-61	Texan	T39	1½ Ton	Lycoming K	.80
J-113	Tiffin	TW, UW	5 and 6 Ton	Continental B2	1.55
J-110	Tiffin	GW, MW	1½ and 2½ Ton	Continental C4	1.35
J-108	Tiffin	PW	3½ Ton	Continental E4	1.50
J-176	Titan		3½ and 5 Ton	BU YTU	1.60
J-110	Tower	H, J	1½ and 2½ Ton	Continental C4	1.35
J-108	Tower	G	3½ Ton	Continental E4	1.50
J-109	Traffic	746	2 Ton	Continental N	1.00
J-109	Transport	20,30	1 and 1½ Ton	Continental N	1.00
J-112	Transport	50	2½ Ton	Continental C2	1.20
J-176	Transport	75	5 Ton	BU YTU	1.60
J-102	Taylor	C	2 Ton	Buda ITU	1.20
J-96	Triangle	AA	¾ Ton	H. S. 7000	1.05
J-144	Triangle	B	2½ Ton	Waukesha CU, FU	1.45
J-176	Traylor	F	5 Ton	BU YTU	1.60
J-102	Twin City	Minneapolis	2 Ton	Buda ITU	1.20
J-102	Ultimate	A	1½ Ton	Buda ITU	1.20
J-102	Ultimate	B	2½ Ton	Buda HTU	1.20
J-102	United	B	2½ Ton	Buda HU	1.20
J-102	United	C	3½ Ton	Buda HU	1.20
J-102	United	T	6 Ton	Buda HU	1.20
J-113	U. S. Military Truck	Class B	5 Ton	Continental B2	1.55
J-110	United States	H	2½ Ton	Continental C4	1.35
J-108	United States	J	3½ Ton	Continental E4	1.50
J-111	United States	N, NW, NP	1½ and 2 Ton	Cont. N 3¾	1.15
J-109	Velie	46	1½ Ton	Continental N	1.00
J-108	Velie	26B	3½ Ton	Continental E4	1.50
J-176	Veteran	S	4 Ton	BU YTU	1.60
J-109	Victor (Mich.)	A, B	1½ and 2 Ton	Continental N	1.00
J-108	Victor	M	3½ Ton	Continental E4	1.50
J-115	Vim	25,22	1 and 2 Ton	Hercules CU2	1.00
J-115	Vim	23	3 Ton	Hercules CU2	1.00
J-119	Walter (N. Y.)	S	5 Ton	Waukesha DU	1.55
J-106	Waltham	E	1½ Ton	Buda CTU	1.20
J-119	Ward-LaFrance	4 A	3½ Ton	Waukesha DU	1.55
J-119	Ward-LaFrance	5 A	5 Ton	Waukesha DU	1.55
J-96	Ware	A3½	3½ Ton	H. S. 7000	1.05
J-108	Watson	18, N	3½ Ton	Continental E4	1.50
J-136	White	45QN	5-ton		1.40
J-137	White	15-20 Q. K	¾ to 2 ton	1919-23	1.20
J-138	White	40 G. O	3½-ton	1919-22	1.30
J-139	White	45 G. E. C	5-ton	1916-19	1.30
J-109	White Hickory	E, H	¾, 1 and 1½ Ton	Continental N	1.00
J-112	White Hickory	K	2½ Ton	Continental C2	1.20
J-176	Wilcox	E. E.	3½ Ton	BU YTU	1.60
J-99	Wilson	F	1½ Ton	Continental J4	1.15
J-111	Wilson	F	1½ Ton	Cont. N 3¾	1.15
J-113	Wilson	H	5 Ton	Continental B4	1.55
J-110	Wilson		2 and 2½ Ton	Continental C2	1.35
J-109	Wilson		1½ Ton	Continental N4	1.00
J-114	Wilson		3½ and 5 Ton	Continental L4	1.35
J-96	Winther	751	¾ Ton	H. S. 7000	1.05
J-109	Witt Will	N	1 and 1½ Ton	Continental N	1.00
J-109	Wolverine	C, J, J1, J2	1, 1½ and 2 Ton	Continental N	1.00
J-96	Yale	A	1½ Ton	H. S. 7000	1.05

Alphabetical List—MOTORS

Stock No.	MAKE	MODEL	No. Cyl.	List
J-168	Ansted	T 6 Ton		.95
J-102	Buda	HU, HTU, HO, IU, ITU	4	1.20
J-103	Buda	ETU	4	1.30
J-104	Buda	RU, WU	4	1.10
J-105	Buda	E	4	1.20
J-106	Buda	CTU, DTU	4	1.20
J-107	Buda	MU	4	1.15
J-146	Buda	OU-TU-QU-CTQ	4	1.25
J-176	Buda	YU, YTU	4	1.60
J-79	Continental	7W, 8W, 9W	6	.95
J-108	Continental	E4	4	1.50
J-80	Continental	7R	6	1.00
J-63	Continental	6N, 7N, 8N, 9N, 10N, 11N, 10D	6	1.00
J-109	Continental	N-3¾	4	1.00
J-110	Continental	C, C4	4	1.35
J-111	Continental	N3¾	4	1.15
J-112	Continental	C2	4	1.20
J-113	Continental	B2	4	1.55
J-85	Continental	6H	6	1.15
J-114	Continental	L4	4	1.35
J-154	Continental	7K	6	1.35
J-99	Continental	J4	4	1.15
J-82	Falls	With Grooved Stem	6	.95
J-83	Falls	With Slotted Stem	6	.95
J-115	Hercules	CU2, 3	4	1.00
J-116	Hercules	MU2, 3	4	1.25
J-96	Herschell-Spillman	7000	4	1.05
J-96	Herschell-Spillman	11000	6	1.05
J-166	Hinkley	HAA 4 Ton		1.20
J-167	Hinkley	HA 4 Ton		1.20
J-117	LeRoi	2C	4	.95
J-61	Lycoming	K, KA, KB, KM, L	4	.80
J-72	Northway	110 and 111	6	.90
J-152	Northway	209 8 Ton		.95
J-81	Rutenber	22, 25	6	.95
J-144	Wankesha	CU, FU	4	1.45
J-118	Waukesha	BX, BUX, B, TU, BU4	4	1.55
J-119	Waukesha	DU, EU	4	1.55
J-120	Waukesha	P, PU4, PU7, M, MU4, L, LU4, J	4	1.50
J-135	Waukesha	RU, BU, HU	4	1.30
J-143	Weidley	M. A. B.	4	.95
J-121	Wisconsin	RAU, RBU	4	1.55
J-122	Wisconsin	J, JU, A	4	1.75
J-123	Wisconsin	TAU, TU, UAU, EAU, VAU, UU	4	2.10

Alphabetical List—TRACTORS

Stock No.	MAKE	MODEL	No. Cyl.	List
J-153	Case Tractor	10-18	4	1.25
J-87	Fordson		4	.75

No-Leak-O Piston Rings

No-Leak-O Piston Rings are made from a special close-grained tough gray iron, slightly softer than cylinder metal, retaining on the inside the skin of the casting, thereby assuring them a long life and lasting resiliency.

The No-Leak-O Piston Ring is made in one piece, with a step-lapped joint. The original, patented No-Leak-O groove, cut around the ring at a right angle with the face, slopes off at an angle of about 45°. On the down stroke of the piston the oil collects in the grooves of all the rings.

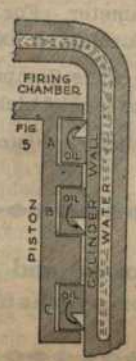
The oil in the groove forms a packing between ring and cylinder wall just where needed for lubrication, at the same time forming the oil seal.

On the upstroke the oil leaves the sloping face of the groove and is spread over the cylinder walls. On the following down stroke the square edge forming the groove again gathers the surplus oil and pulls it toward the oil pit.

Patented manufacturing processes result in even tension on the cylinder wall. No-Leak-O Piston Rings mean the elimination of carbon and smutty plugs, perfect oil control, high compression and power. Their low price and long life under all motor conditions, make No-Leak-O the most economical and satisfactory ring for all types of gas engines.

This shows a cross-section of the No-Leak-O Ring, illustrating the shape of the groove which keeps scraping the surplus oil down the cylinder wall and prevents excess oil pumping.

This illustration shows how the No-Leak-O Rings appear in the cylinder. In this case the top ring is used upside down. This prevents the unvaporized and unburned gasoline from passing the piston and going down into the crank case. For bad oil pumping engines, however, all rings should be used right side up.



Furnished in all sizes to fit practically any Automobile, Truck or Tractor. When ordering give bore of cylinder, width of ring, or year, model, and make of car. Carried in stock in all regular standard and oversizes. When oversize is wanted be sure to specify. Packed 12 rings in a carton plainly marked with size and oversize.

	Each
2 inch to 3 1/16 inch incl. in diameter	.35
4 inch in diameter	.40
4 1/8 inch in diameter	.45
4 1/4 inch to 4 3/8 inch incl. in diameter	.50
4 1/2 inch to 4 5/8 inch incl. in diameter	.55
4 3/4 inch to 4 7/8 inch incl. in diameter	.60
5 inch to 5 1/4 inch incl. in diameter	.65
5 3/8 inch to 5 1/2 inch incl. in diameter	.70
5 5/8 inch to 5 7/8 inch incl. in diameter	.75
6 inch to 6 1/8 inch incl. in diameter	.85
6 1/4 inch to 6 1/2 inch incl. in diameter	.95
6 5/8 inch to 6 7/8 inch incl. in diameter	1.00

Prices on Rings under 2 inch and over 7 inch in diameter given on request.

The No-Leak-O Silent Salesman

We loan this handsome Cabinet to any dealer who purchases "No-Leak-O" "Oilsealing" piston rings.

Put the cabinet where your customers can see it. Keep it filled with printed matter. It will draw the attention of every visitor to your store and help you sell more No-Leak-O Rings. This display advertising will link your business up to the National advertising campaign and bring profitable trade to your door.

Quality Piston Rings

These Rings are made by the largest plant in the world devoted exclusively to the manufacture of Piston Rings. Each and every Ring is carefully inspected by the factory before shipped. All Rings are cast individually by the factory's original process, which insures equal distribution of pressure and a true circle when Rings are finished. Retaining the skin of the castings on the inside of each Ring provides long life and lasting resiliency.

Quality Piston Rings are used as initial installation in more high grade engines than any other two makes, and are recognized by the trade as the standard of accuracy and efficiency.

They are wrapped in wax paper and packed 12 rings to the box. We can furnish all standard sizes and standard oversizes.

1 x⅛	Each,	.50
1¼x⅛	Each,	.40
1½x⅛ to 1¾x 3/16	Each,	.35
2 x⅛ to 3⅞x 3/16	Each,	.25
4 x⅛-3/16-¼	Each,	.28
4 x 3/16 to 4⅛x¼	Each,	.29
4⅛x 3/16 to 4¼x¼	Each,	.30
4¼x 3/16 to 4⅜x¼	Each,	.31
4⅜x 3/16 to 4½x¼	Each,	.32
4½x 3/16 to 4⅝x¼	Each,	.33
4⅝x 3/16 to 4¾x¼	Each,	.35
4¾x 3/16 to 4⅞x¼	Each,	.36
4⅞x 3/16 to 5 x¼	Each,	.37
5 x 3/16 to 5⅛x 3/16	Each,	.40
5⅛x⅜ to 5¼x 3/16	Each,	.43
5¼x⅜ to 5⅜x 3/16	Each,	.45
5⅜x⅜ to 5½x 3/16	Each,	.47
5½x⅜ to 5⅝x 3/16	Each,	.49
5⅝x⅜ to 5¾x 3/16	Each,	.52
5¾x⅜ to 5⅞x 3/16	Each,	.55
5⅞x⅜ to 6 x 3/16	Each,	.60

In addition to the sizes of Piston Rings shown, we can furnish practically any size used on an internal combustion engine. Orders must state size wanted and whether standard or oversize. Cylinders should be carefully measured to determine proper oversize.

Rush Piston Ring Extractor

With this tool it is easy to take the rings off of a piston. Saves time and prevents damage done to piston rings and ring seats, which commonly occurs when hacksaw blades, screw drivers, etc., are used. Packed one in a carton.

Rush Piston Ring Extractor.....Each, 1.50

Victory Piston Ring Compressor

This Compressor is a big time and trouble saver. Pistons can be inserted in cylinders in a few seconds.

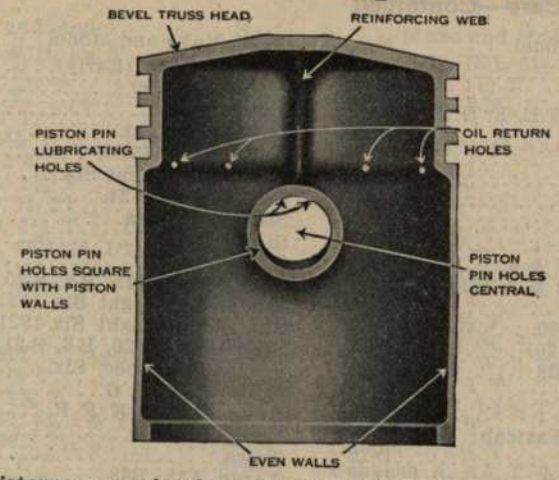
To operate, insert piston into cylinder, place steel band of Compressor over rings, compress and push piston into cylinder. Fits piston rings from 2¾-inch to 5-inch in diameter. For cylinders over 5 inches in diameter, we can furnish an extra band at a slight extra cost.

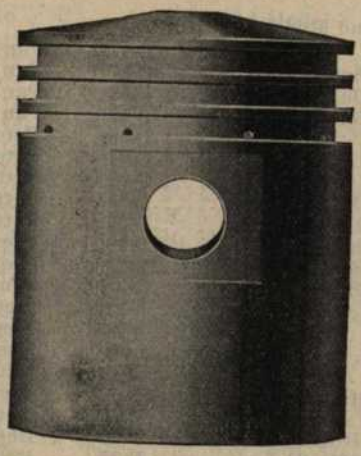
This Compressor is well made, thoroughly practical, and is highly nickel-plated. Packed one in a carton.

Victory Piston Ring Compressor.....Each, 1.50

We are in position to furnish Cylinder Reboring and Honing Machines, Starrett Calipers and Micrometers, and a full line of tools for motor overhauling. Refer to index for page.

Replacement Pistons





These pistons are made of semi-steel which makes an exceptionally light piston and at the same time one that will give excellent service. They are guaranteed to be as nearly perfect and true as any piston made and will not warp or get out of round in your stock as is the case with some makes. Furnished in either semi-finished or finished. The semi-finished pistons have the ring grooves and piston pin holes all finished but the outer surface of the piston is only lathe turned, while in the finished piston the entire surface is ground. Packed one set in a box plainly marked on the outside.

The list below shows the stock numbers of the pistons intended for the various makes of cars. For specifications and prices, see pages 138-139. If piston wanted is not listed below, send us your order, and we can no doubt supply by ordering direct from factory.

For Passenger Cars

Make and Model	No.
Abbott Detroit 6-44	D-30
Abbott Detroit 6-60, 6-65	D-23
Ace L	D-81
Allen 43	D-21
Allen 41	D-59
Allen 37	D-60
American Beauty Six, E, F, G	D-30
American 6B	D-54B
American C	D-81
Anderson 400 A, B, C, D, E	D-30
Anderson S30, S40	D-39
Anderson 400 G70, 400 S70	D-23
Anderson S-40, 1922	D-119
Anderson 41	D-141
Anstead Motor	D-156
Apperson 1921-22-23	D-7
Auburn 6-39B, 1918-19	D-30
Auburn 6-39 H & R	D-39
Auburn 6-40, 6-40A, 6-44	D-23
Bay State 1922	D-119
Bay State	D-39
Briscoe 24	D-15
Briscoe 34	D-34
Buick D-45 Sec. Series	D-45
Buick D-45 First Series	D-46
Buick E. H. & K. D-35	D-47
Buick 1921	D-48
Buick 1922-23	D-49
Buick B25, C24, C25	D-152
Buick C36, C37, B, C & D 54 & 55	D-153
Bush 6-20	D-54B
Bush B	D-30
Bush E	D-78
Cadillac 55, 57, 59, 61	D-50
Cadillac 53	D-51
Cadillac 51	D-77
Case V Early	D-23
Case V 1918-19	D-29
Case X	D-119
Chalmers 35 A & B	D-8
Chalmers 35C	D-18
Champion K O Touring	D-78
Chandler 1920	D-32
Chandler 1918-20	D-43
Chandler 1914-18	D-14
Chandler	D-44
Chevrolet	D-64
Cleveland 41	D-16
Cleveland 40	D-97
Climber 4	D-80
Climber 6	D-81
Cole 8	D-86
Columbia C & D, 17-19	D-30
Columbia 6-20, C S	D-39
Columbia 1920	D-54B
Columbia Light Spec. 6	D-141
Comet C-51	D-23
Comet C-53	D-29
Commonwealth 42	D-80
Commonwealth	D-78
Continental 6Y	D-141
Continental 7W	D-30
Continental 7R	D-39
Continental 6 SA	D-140
Continental 8R	D-119
Continental 8A	D-142
Continental 6H, 7 N	D-23
Continental 9N	D-29
Crawford 19, 6-40	D-23
Crow-Elkhart 32-34-36	D-78
Crow-Elkhart H42-44-46	D-54B
Crow-Elkhart Taxicab	D-123
Cunningham 8	D-87
Daniels A & B 8	D-81
Davis 1917-18-19	D-30
Davis 51, 55, 57	D-39
Davis J & J1	D-23
Davis 70, 1-2-3-5	D-141
Dixie Flyer HS-70	D-80
Dixie Flyer HS-50	D-79
Dodge	D-63
Dort Early	D-30
Dort 8, 10, 11, 15, 17, 7	D-78
Dort 5, 5A, 6, 7, 9	D-79
Durant 4, A-22	D-155
Durant 6, B-22	D-156
Elcar 6-60	D-119
Elcar 7R	D-23
Elcar 4, D, H, K, G	D-78
Elcar 6, D, H, K, G	D-30
Elgin 1916-19 L	D-98
Elgin 1916-19 M	D-99
Elgin 1918-20 K	D-35
Elkhart 6S, 65	D-81
Elkhart 4L, 55	D-78
Empire 70A	D-30
Empire 73	D-39
Enger 6-50	D-23
Essex	D-69
Falls Motor, L	D-98
Falls Motor, M	D-99
Falls Motor, K	D-35
Ferris C-20	D-29
Ford T	D-42
Franklin 9, 9B	D-106
Franklin 9, 9B	D-107
Fremont R, 6	D-35
Gardner G	D-78
Gardner Series 5	D-157
Glide	D-54B
Grant G & H	D-35
Grant G	D-99
Grant K	D-98
Grant H 1920-22	D-134
H. C. S. Series 1-2-3, 1920-21	D-135
Halladay (Manhattan Spec.)	D-54B
Hamlin-Holmes	D-78
Hanson 6-54-60	D-30
Hanson 6-66	D-119
Haynes	D-89
Haynes	D-90
Herschel-Spillman Motor	D-80
Herschel-Spillman Motor	D-81
Hollier 206B	D-30
Hudson 6-40	D-23
Hudson 0	D-28
Huffman 6R, Late	D-119
Hupmobile R	D-104
Hupmobile N	D-105
Jackson 6-38	D-30
Jewett First Model	D-145
Jewett Late	D-146
Jones 28, 28B, B1	D-23
Jordan M, 1923	D-140
Jordan M, 1921-22	D-39
Jordan F	D-29
King F & G, 1918-19	D-151
King H, 1920	D-506
Kissell 38, 1917-19	D-30
Kissell 100 Point 6	D-30
Kline 6-38C, 6-42	D-30
Kline 6-55K	D-39
Kline 6-60L	D-119
Lexington T, 1920-22	D-39
Lexington R 19, S, T. 1917-18-19	D-30
Lexington 23	D-156
Liberty 10B	D-30
Liberty 10A	D-39
Lone Star 4-35	D-78
Lorraine 21T	D-80
Lycoming Motor	D-78
Lycoming Motor	D-79
Lycoming Motor	D-157
Maibohm B6	D-35
Marion Handley B	D-29
Marion Handley B	D-23

Replacement Pistons—Continued

For Passenger Cars—Continued

Make and Model	No.
Maxwell 25	D-41
McLaughlin Buick E, H & K	D-47
McLaughlin Buick 1921	D-48
McLaughlin Buick 1922-23	D-49
Merit	D-39
Mitchell E-40	D-71
Mitchell C, E, F, 42	D-72A
Monroe M-4, M-5, S9, S10	D-133
Moon 6-48, 1917	D-30
Moon 6-48, 1920	D-39
Moon 6-66, 6-68, 1917-18	D-23
Moon 6-68, 1920	D-29
Moon 6-58	D-119
Moon 6-40	D-141
Nash 681-687	D-82
Nash 4	D-83
National Sextette	D-28
National Six AE, AF	D-23
Oakland 34, B & C	D-26
Oakland 32, 32B, 34	D-27
Oldsmobile 6-37A	D-26
Oldsmobile 8-45B	D-38
Oldsmobile 4-43A	D-64
Overland 85-6	D-30
Overland 82, 86	D-23
Overland Light 4	D-103
Overland 79, 80, 83, 83B, 84B	D-67
Overland 90	D-68
Overland Red Bird & Champion	D-158
Overland 75B	D-84
Packard Single Six	D-1
Packard Ser. 1-25, 1-35	D-52
Packard Ser. 2-25, 2-35, 3-25, 3-35	D-53
Paige 6-55M, 1916-17-18	D-23
Paige 6-46, 1919-20	D-29
Paige 6-38, 1916-17-18-19	D-54B
Paige 6-42 First Model	D-145
Paige 6-42 Late	D-146
Paige 6-66	D-142
Pan 250	D-23
Pan American J7	D-30
Pan American 6-55 E, F, G	D-81
Pan American G5	D-54B
Paterson 6-52, 23	D-119
Paterson 4-32	D-86
Pathfinder 6	D-23
Patterson 6-46	D-30
Patterson 6-50	D-39
Peerless 56 Ser. 5 & 6	D-96
Peerless 56 Ser. 2 & 3, 1918-19	D-81
Pennant Taxicab	D-126
Piedmont 4-30, N-30	D-78
Piedmont 4-30, N-30	D-30
Pierce Arrow C-4-38	D-110
Pilot 6-50	D-81
Premocar 6-40A	D-35
Rauch & Lang Taxicab	D-126
Regal J	D-23
Reo 6 M N, 1916-18	D-22
Reo 4	D-65
Reo 4	D-40
Roamer 6-5-4	D-23
Roamer C-6-54, 1918-19-20	D-29
Roamer 1916	D-54B
Rutenber Motor	D-54B
Rutenber Motor	D-31B
Saxon 6	D-25
Saxon Old Four	D-183
Sayers Six D P Early	D-30
Sayers Six D P Late	D-39
Sayers Six	D-23
Scripps Booth B-39	D-39
Seneca L2, 02	D-78
Severin Six	D-29
Sheridan Four 1920-21	D-64
Skelton	D-78
Southern 6-60	D-81
Standard 8G & H	D-81
Stanwood Six (Early)	D-30
Stanwood A-20	D-39
Star	D-141
Stearns Knight	D-95
Stephens 70-75-80	D-30
Stephens Salient Six	D-133
Stephens 1923-24	D-139
Stevens-Duryea	D-109
Sterling B	D-81
Studebaker	D-55
Studebaker S-19, B-6, S-20, B-6	D-56
Studebaker Light Six 1923	D-58B
Studebaker Light Six 1921-22	D-58
Studebaker S-20, B-6, S-21, B-6	D-57
Studebaker Spec. Six	D-88
Stutz S. H., S. G	D-102
Stutz 4A-B-C, E F R	D-160
Templar	D-24
Tulsa	D-80
Texan A38, B38	D-78
Velie 22-28-38-40	D-30
Velie 48-1920	D-39
Velie 39-15-27	D-23
Velie M-34, 1920	D-35
Vogue 6-66	D-29
Vogue 6-55	D-81
Walker Motor	D-134
Wescott A & B	D-30
Wescott C-38, 1920	D-39
Wescott A44	D 39
Wescott 18	D-23
Wescott C48, 1918-20	D-29
Wescott B-44	D-119
Wills-Sainte Claire	D-20
Willys 6-88	D-23
Yellow Cab	D-23
Yellow Cab	D-37

For Motor Trucks

Make and Model	No.
Ace A, 1½ T	D-122
Ace 2½ T	D-125
Acme B, 1½ T	D-37
Acme A, 2 T	D-33
Acme C & D, 3½-4 T	D-120
Acme E, 5 T	D-132
Acme 40, 1½-2 T	D-147
Acme 60, 2½-3 T	D-148
Acme 90, 3½-4½ T	D-149
Acme 125, 5-6¼ T	D-150
Apperson 4-45, 6-60	D-127
Atlas 18, 1 T	D-78
Atlas Dispatch 21, 1 T	D-78
Atlas 25-40, 1½ T	D-126
Bessemer G, 1 T	D-23
Bessemer H2, 1½ T	D-37
Bessemer J, J2, 2½ T	D-33
Bessemer K2, 4 T	D-120
Bridgeport, 1½ T	D-121
Bridgeport, 2½B-2½T	D-125
Buda Motor	D-121
Buda Motor M U	D-123
Buda Motor C T U	D-122
Buda Motor O U	D-124
Buda Motor H U	D-125
Buda Motor W T U	D-126
Buda Motor Y T U	D-127
Case Model A, 1 T	D-123
Chase B & X, 2½-3 T	D-124
Chevrolet Truck, 1 T	D-64
Chicago C, 1½-2½ T	D-74
Chicago C & D, 3½-5 T	D-76
Clydesdale 10A, 42, 32C, 1-1½ T	D-3
Clydesdale 45, 65, 2½ T	D-33
Clydesdale 65 EX, 90C, 2½-3½ T	D-120
Clydesdale 65E, C, 90C, 2½-3½ T	D-76
Clydesdale 120B, 5 T	D-132
Clydesdale 65C, 2½ T	D-75
Clydesdale 8, 2½ T	D-148
Clydesdale 6, 3½ T	D-149
Clydesdale 4-2, 5-6-7 T	D-150
Collier 18, 1 T	D-23
Collier 19, 1½ T	D-37
Collier 20-22, 2-2½ T	D-33
Comet, 1½ T	D-78
Commerce E & EP, 1½ T	D-37
Commerce T12, 16, ¾-1-1½ T	D-37
Commerce 18, 2½ T	D-33
Commerce 14, 1½ T	D-147
Commerce 25, 2½ T	D-148
Continental Motor 6H, 7N	D-23
Continental Motor NA	D-37
Continental Motor CA	D-33
Continental Motor	D-36
Continental Motor	D-117
Continental Motor	D-118
Continental Motor E4	D-120
Continental Motor B2	D-132
Continental Motor J4	D-147
Continental Motor K4	D-148
Continental Motor L4	D-149
Continental Motor B5	D-150
Dort S, 1½ T	D-122
Dort M, 2½ T	D-125
Dort L & W, 3½ T	D-127
Davis J & J1	D-23
Day Elder A, 1 T	D-23
Day Elder B, 1½ T	D-37
Day Elder A N, 1½ T	D-126
Day Elder B N, 2 T	D-147
Day Elder D, 2 T	D-33
Day Elder D N, 2½ T	D-148
Day Elder B, 2½ T	D-125
Day Elder F, 3½ T	D-120
Day Elder F N, 4 T	D-149
Day Elder E, 5 T	D-127
Dearborn F, 1½ T	D-23
Dearborn BF 48, 1½-2 T	D-121
Dearborn E (Speed), 1 T	D-123
Dearborn BF 48, 2 T	D-122
Dearborn F, 1½ T	D-122
Defiance B & C, 1½-2 T	D-37
Denby 12, 1 T	D-23
Denby 33, 13-15, 1½-2 T	D-37
Denby 33, 2 T	D-147
Denby 25, 3 T	D-33
Denby 35, 3 T	D-148
Denby 27, 210, 5 T	D-120
Denby 27, 4 T	D-149
Denby 210, 214, 5-7 T	D-150
Dependable A, 1¼ T	D-123
Dependable E, F, 2¼-4 T	D-125
Dependable G, 3½ T	D-127
Dependable C, 1½ T	D-122
Diamond J5, 1 T	D-23
Diamond J4, TSF, 1½ T	D-37
Diamond J3, 2 T	D-33
Diamond L B & R, 3½-5 T	D-120
Diamond T, S, 5-6 T	D-150
Dodge, 1 T	D-63
Dort E R S, 1½ T	D-121
Douglas G, 1½ T	D-121
Douglas G, 1½ T	D-122
Douglas H, HW, 2-3 T	D-125
Erie ½ T	D-122
Erie C, 1½ T	D-121
Erie 2½-3 T	D-125
Erie 1½-2-2½ T	D-33
Famous, 1 T	D-23
Famous, 1½ T	D-37
Federal R-2, S-21, S-22, 1-1½ T	D-147
Federal TE, VE, 1½-2 T	D-33
Federal STU, 1-1½-2 T	D-73
Federal U2, 2½ T	D-148
Federal W, WD, WE, X, SD, XE, 3½ T	D-120
Federal W2, 3½-4 T	D-149
Federal X2, 5 T	D-132
Federal X2, 5-6 T	D-150
Ford T, 1 T	D-42

Replacement Pistons—Continued

For Motor Trucks—Continued

Make and Model	No.
Fulton A, C & D, 1½ T	D-80
Fulton C, 2 T	D-123
Gabriel, 1½ T	D-124
Gabriel E, 2 T	D-125
Gabriel F, 3½ T	D-127
Garford 15, 1 T	D-123
Garford 25B, 1½ T	D-126
Garford 70B, H, 2T	D-125
Garford 77D, 3½ T	D-127
Garford 75C, 66B, 25, 1-1½ T	D-122
Garford 68, 77C	D-160
Gary F, FT, 1 T	D-122
Gary F, 1 T	D-126
Gary F, 1 T	D-37
Gary G, H, HT, J, 1½-2½ T	D-125
Gary K, T, 3½ T	D-127
G. M. C. 15, 1¼ T	O-23
G. M. C. 16-21, 31, 1½ T	D-37
G. M. C. 71-101, 3½ T	D-120
G. M. C. 41, 2 T	D-33
Giant 15A, 1½ T	D-37
Giant 16, 2-2½ T	D-33
Giant 17-18, 3½-5 T	D-120
Giant 15, 1 T	D-23
Graham A, 1½ T	D-37
Graham Bros., 1-1½ T	D-63
Gramm Bernstein 10, 1 T	D-78
Gramm Bernstein 15-65	D-37
Gramm Bernstein 20, 25, 41, 2-2½ T	D-33
Gramm Bernstein 35, 3½ T	D-120
Gramm Bernstein, 50-60, 5 T	D-132
Gramm Pioneer 15-65, 1½ T	D-147
Gramm Pioneer 20, 2 T	D-148
Herschell Spillman Motor	D-80
Herschell Spillman Motor	D-81
Hercules Motor	D-73
Hercules Motor	D-74
Hercules Motor	D-75
Hercules Motor	D-76
Indiana R, 3½ T	D-17
Indiana DP, 1½-2 T	D-19
International Speed Truck, ¾ T	D-78
Jackson B & C, 3½ T	D-120
Jeffrey Quad	D-125
Jumbo 15, 1½ T	D-122
Jumbo 35-40, 3½-4 T	D-127
Kankakee EP, 2½ T	D-23
Keystone 40, 2 T	D-121
King, 3½ T	D-120
Kissell, Freighter Truck	D-125
Kohler F, 3½ T	D-76
Kohler M, MC	D-74
Kohler C D, 1½ T	D-80
Kohler K, L, 1-1½ T	D-78
Lycoming Motor	D-78
Mack A C, 5-7 T	D-10
Mack A B, 1-2 T	D-11
Master J W, JI, 1½ T	D-124
Master D, DL, DT, W, WL, 2½-3 T	D-125
Master A, AL, E, EL, 3½-4 T	D-127
Master 11, 1¼ T	D-126
Nash 4018, 2 T	D-125
Noble A21, 1 T	D-78
Noble B30, 1½ T	D-122
Noble A21, 1¼ T	D-123
Noble D-50, D-51, 2½ T	D-125
Noble E70, E71, 3½ T	D-127
Noble NW, 1½ T	D-37
Noble NW, 2-2½ T	D-33
Noble NW, 4 T	D-120
Noble A-75, A-21, 1-1¼ T	D-126
O. K., 1 T	D-123
O. K., 2½ T	D-125
O. K. 3½ T	D-127
Ogden, 1-1½ T	D-37
Ogden 2-2½ T	D-33
Ogden F, 3½ T	D-120
Ogden G, 5 T	D-132
Ogden F, 3½ T	D-149
Old Hickory M, ¾ T	D-79
Old Hickory W, 1 T	D-37
Oldsmobile, 1 T	D-64
Oneida A, B, 1-1½ T	D-37
Oneida C, 2 T	D-33
Oneida D, 3½ T	D-120
Oshkosh A, AA, 2 T	D-80
Oshkosh, 1½-2 T	D-81
Oshkosh B, BB, 2½ T	D-74
Packard S, TC, TD, ATD, 2-3-4 T	D-2
Packard EC, EX, 2 T	D-3
Packard 1, 1½, 2D, 1-1½-2 T	D-4
Packard E5, E6, 5-6 T	D-5
Paige 50-18, 2½ T	D-33
Paige 51-18, 3½ T	D-120
Parker, 4-5 T	D-37
Parker, 2-3 T	D-23
Parker M20, 5 T	D-160
Pierce Arrow X4, X5	D-110
Reliance 20B, 2½ T	D-125
Republic 10, 10E, HX, 1-1½ T	D-37
Republic 11X, 1½ T	D-147
Republic 19, 2½ T	D-33
Republic 19, 2½ T	D-148
Republic 20, 3½ T	D-120
Republic 20, 3½ T	D-149
Republic 12, 2 T	D-124
Republic 20B, 2½ T	D-125
Republic 75, ¾ T	D-78
Sandow G C, C H, 1-1½ T	D-23
Sandow C G I, 1½-2 T	D-37
Sandow J, 2½ T	D-33
Sandow L K M, 3½-5 T	D-120
Sandow M, 5 T	D-150
Sanford W15, 1 T	D-37
Sanford W25, XV35, 2½ T	D-33
Sanford XV35, W35, W50, 3½-5 T	D-120
Sanford XV50, 5 T	D-132
Schwartz B, 1-1½ T	D-37
Schwartz 20, 1-1¼ T	D-126
Schwartz, 2½ T	D-33
Schwartz A, 1¼ T	D-78
Schwartz L, LL, LS, 3 T	D-125
Schwartz M, ML, MS, 5 T	D-127
Selden TXR, TWL, 1 T	D-23
Selden A, 1½ T	D-37
Selden 30C, 1½ T	D-147
Selden JCB, JWB, 2-2½ T	D-33
Selden 50-B, 2½ T	D-148
Selden NL, DL, 3½-5 T	D-120
Selden 53B, 70B, 2½-3½ T	D-149
Selden SA, 90, 5 T	D-132
Selden 73, 90A, 5 T	D-150
Service 25, 1¼ T	D-126
Service 36, 51, 71, 1½-2½-3½ T	D-124
Service 52, 2½ T	D-125
Service 76, 101, 275, 300, 3½-5 T	D-127
Signal N F Truck	D-37
Signal N F	D-147
Signal F, H J, JL, 1-1½-2½ T	D-33
Signal H J, 2½-3½ T	D-148
Signal M, ML, 3½ T	D-120
Signal M, 5 T	D-149
Signal R, 5 T	D-132
Signal R, 7½ T	D-150
Stewart 8, 1 T	D-23
Stewart 12, 1 T	D-80
Stewart 9, 1½ T	D-37
Stewart 7, 2 T	D-33
Stewart 10, 3½ T	D-120
Stewart 15, 1¼ T	D-123
Stewart 7X, 2 T	D-125
Stewart 10X, 3½ T	D-127
Tiffin A, ¾ T	D-23
Tiffin GW, RW, SW, 1½ T	D-37
Tiffin RW, F35, 3½ T	D-120
Tiffin MW, F15, F25, 1½-2-2½ T	D-33
Tiffin F50, F60, TW, 5 T	D-132
Tiffin 6 U, W, 6 T	D-132
Tiffin F35, 3½-4 T	D-149
Titan HD, HT, TS, 3½-5-6 T	D-127
Transport 20	D-121
Transport 26, 1½ T	D-126
Transport 60-75, 3½-5 T	D-127
Transport, 1-1½ T	D-37
Transport 35-55, 2-3 T	D-33
Traffic 4000 C, 2 T	D-37
Tulsa D	D-78
U. S. E, H, 2½ T	D-33
U. S. D J, 3½ T	D-120
U. S. N, NC, NP, NW, 1½ T	D-37
U. S. U-1, NW, 1¼-2 T	D-126
United A, AX, 1½ T	D-122
United B, BX, 2½ T	D-125
United C, CX, 3½ T	D-127
United U, UX, 5 T	D-127
Velie 46, 1½ T	D-37
Velie 25A, 25V, 2 T	D-33
Velie 26B, 2½ T	D-120
Victor L, 2 T	D-33
Victor M, 3½ T	D-120
Vim 21 & 26, ½-¾ T	D-93
Vim 22-25, ½ T	D-73
Vim 23, 3 T	D-75
White GK	D-61
White GK	D-61S
White GEC	D-62
White	D-91
White GN	D-92
White Late, 3-5 T	D-101
White Hickory E & H, 1-1½ T	D-37
White Hickory K, 2½ T	D-33
White Hickory N, 3½ T	D-120
Wilson N, 1 T	D-23
Wilson E, 1½ T	D-37
Wilson EA, 2-2½ T	D-33
Wilson G & H, 3½-5 T	D-120
Wilson F, 1½ T	D-147
Wilson EA, 2½ T	D-148
Wilson G, 3½ T	D-149
Wisconsin (Loganville), 2 T	D-80
Wisconsin A Motor	D-160
Wisconsin A Motor	D-160B
Yellow Cab M42, 1¼ T	D-37

For Tractors

Make and Model	No.
Allis Chalmers 15-25	D-138
Appleton 12-20	D-125
Bates Steel Mule F-18-25	D-138
Bates Steel Mule F-18-25	D-138
Bates Steel Mule 15-22	D-108
Buda Motor HU	D-125
Buda Motor YTU	D-127
Case	D-125
Case 15-27	D-12
Cletrac W 12-20	D-137
Cleveland Early	D-136
Continental Motor NA	D-37
Continental Motor CA	D-33
Continental Motor EA	D-120
Dart Blue Jay TE	D-125
Dart Blue Jay TV	D-127
Fordson	D-100
Franklin	D-125
Hercules Motor	D-74
Herschell Spillman Motor	D-80
Lauson S, 12-25	D-138
Lycoming Motor	D-78
Midwest Motor	D-138
Parrett H	D-125
Plowman 13-30	D-125
Plowman 15-30	D-127
Pony	D-125
Samson "D"	D-64
Turner Simplicity	D-125
Uncle Sam	D-137

Replacement Piston Prices

Cat. No.	For Car or Motor	List Pr. Semi-Finished	List Price Finished	No. Cyl.	Dia.	Length	Dia. Wrist Pin Hole	Compression	Ring Grooves	Wt. Oz. Stand. Size
D-1	Packard Single Six	3.05	3.60	6	3 3/8	3 3/8	3/4	1 7/8	3–3/16	22
D-2	Packard S, TC, TD, ATD, Tr.	5.05	5.95	4	4 1/2	5 3/8	1 1/4	2 13/16	3–1/4	59 1/2
D-3	Packard Tr. EC, EX	4.95	5.85	4	4 3/16	4 3/4	1 7/8	2 9/16	3–1/4	50
D-4	Pack. 1, 1 1/2 & 2D, 1, 1 1/2, 2E.	4.50	5.30	4	4	4 3/4	1 7/8	2 9/16	3–1/4	47
D-5	Packard E5, E6, 5 & 6 Ton	6.65	7.80	4	5	5 3/8	1 1/4	2 11/16	3–1/4	74
D-7	Apperson 21-22-23	3.15	3.70	8	3 1/4	4	11/16	2	3–3/16	24 1/2
D-8	Chalmers 35A & B	3.35	3.95	6	3 1/4	4	11/16	2 3/8	3–3/16	25
D-10	Mack AC, 5-7 1/2 Ton	6.50	7.65	4	5	6 13/16	1 7/16	3 11/16	4–1/4	113
*D-10-B	Mack AC, 5-7 1/2 Ton	7.60	8.95	4	5	6 13/16	1 7/16	3 11/16	4–1/4	110
D-11	Mack AB, 1 & 2 Ton	5.40	6.35	4	4	6	1 5/16	3 3/8	4–3/16	61
*D-11-B	Mack AB, 1 & 2 Ton	6.05	7.10	4	4	6	1 5/16	3 3/8	4–3/16	61
*D-11-SB	Mack AB, 1 & 2 Ton	6.05	7.10	4	4	6	1 5/16	3 3/8	3–3/16	61
D-12	Case Tractor	6.30	7.40	4	4 1/2	5 9/16	1 3/8	2 9/16	4–1/4	64
D-14	Chandler 14, 15, 16, 17, 18	3.50	4.15	6	3 3/8	4 1/4	3/4	2	3–3/16	27 1/2
D-15	Briscoe 24	3.15	3.70	4	3 3/16	3 3/4	3/4	1 11/32	3–3/16	19
D-16	Cleveland 41	3.00	3.55	6	3 3/16	3 1/2	27/32	1 7/8	3–3/16	18 1/2
D-17	Rutenber Motor (Truck)	4.95	5.85	4	4 5/8	5	1	2 11/32	3–1/4	61
D-18	Chalmers 35C	3.35	3.95	6	3 1/4	4	13/16	2 3/8	3–3/16	22
D-19	Rutenber Motor (Truck)	4.50	5.30	4	4 1/8	5	1	2 1/2	3–1/4	57
D-20	Wills-Sainte Cla re	3.25	3.80	8	3 1/4	3 21/32	11/16	1 27/32	3–1/8	
D-21	Allen 43 1919-19i20	3.50	4.15	4	3 1/2	4	7/8	2 1/4	3–3/16	32
D-22	Reo 6	4.05	4.75	6	3 9/16	4 3/16	1.235	2 17/32	3–3/16	
D-23	Continental 6-A-6H-7N	3.40	4.00	4 & 6	3 1/2	3 3/4	1 3/32	2 1/8	3–3/16	30 1/2
D-24	Templar	3.40	4.00	4	3 3/8	4	1	2	2–1/16, 1–3/8	28
D-25	Saxon Six	3.25	3.80	6	2 7/8	3 1/16	5/8	1 1/16	3–3/16	22
D-26	Oakland 34 B & C	2.25	2.65	6	2 13/16	3 17/32	.668	1 23/32	3–3/16	13 1/2
D-26	Oldsmobile 6 37A	2.25	2.65	6	2 13/16	3 17/32	.668	1 23/32	3–3/16	13 1/2
D-26	Scripps-Booth B39	2.25	2.65	6	2 13/16	3 17/32	.668	1 23/32	3–3/16	13 1/2
D-27	Oakland 32-32-B, 34	2.95	3.45	6	2 13/16	3 1/16	.668	1 1/16	3–3/16	14
D-28	Hudson 0 1920	2.90	3.40	6	3 1/2	4 1/16	1 3/32	2	3–3/16	31
D-29	Continental 9N	3.60	4.25	6	3 1/2	4 1/2	1 3/32	2 9/16	3–3/16	36
D-30	Continental 7W	3.05	3.60	6	3 1/4	3 1/2	7/8	2	3–3/16	25 1/2
D-31	Rutenber Motor (Long)	3.15	3.70	6	3 1/8	3 3/4	3/4	1 1/2	4–3/16	24
D-31-B	Rutenber Motor (Long)	3.15	3.70	6	3 1/8	3 3/4	3/4	1 1/2	4–3/16	24
D-32	Chandler 1920	3.40	4.00	6	3 1/2	4 1/8	21/32	2	3–3/16	27
D-33	Continental C2	4.00	4.70	4	4 1/8	5	1 7/32	2 7/16	3–3/16	46
D-34	Briscoe 34	3.60	4.25	4	3 3/8	3 5/8	1	1 13/16	3–3/16	24
D-35	Falls Motor	3.25	3.80	6	3 1/8	3 1/2	.740	1 7/8	3–3/16	24
D-36	Continental	4.50	5.30	4	4 1/8	5 1/4	1 7/32	2 11/16	3–3/16	50
D-37	Continental NA	3.20	3.75	4	3 3/4	3 3/4	1 3/32	2 1/8	3–3/16	34
D-38	Oldsmobile 8 45-B	2.30	2.70	8	2 7/8	3 1/8	.668	1 1/2	3–3/16	14
D-39	Continental 7R	3.15	3.70	6	3 1/4	4 1/16	23/32	2 7/16	3–3/16	32
D-40	Reo	4.30	5.05	4	4 1/8	4 13/16	1.225	2 13/16	3–1/4	42 1/2
D-41	Maxwell 25	2.95	3.45	4	3 5/8	3 1/2	3/4	1 5/8	3–3/16	26
*D-42	Ford Model T	2.45	2.90	4	3 3/4	3 13/16	.740	1 11/16	3–1/4	29
D-43	Chandler 1918-19	3.40	4.00	6	3 1/2	4 1/2	3/4	2	3–3/16	27
D-44	Chandler	3.60	4.25	6	3 1/2	4 1/8	.860	2	3–3/16	28
*D-45	Buick D-45 2d Series	3.25	3.80	6	3 1/4	3 3/4	3/4	1 3/4	3–3/16	26 1/2
*D-46	Buick D-45 1st Series	3.35	3.95	6	3 1/4	3 3/4	7/8	1 3/4	3–3/16	27 1/2
D-47	Buick E45, H45, K45, D35	2.65	3.10	4 & 6	3 3/8	3 3/4	3/4	1 3/4	4–3/16	22 1/2
D-48	Buick 1921	2.65	3.10	6	3 3/8	3 3/4	11/32	1 3/4	4–3/16	22 1/2
D-49	Buick 1922-23	2.65	3.10	4 & 6	3 3/8	3 3/4	3/4	2 1/4	3–3/16	22 1/2
D-50	Cadillac 55	3.10	3.65	8	3 1/8	3 1/16	3/4	1 1/16	3–3/16	18 1/2
D-51	Cadillac 53	3.10	3.65	8	3 1/8	3 1/16	5/8	1 1/16	3–3/16	18 1/2
D-52	Packard, Series 1-25, 1-35	3.10	3.65	12	3	3 11/32	11/16	2 1/32	3–3/16	16 1/2
D-53	Packard, Series 2 and 3	3.10	3.65	12	3	3 9/32	5/8	2 1/32	3–3/16	16 1/4
D-54-B	Rutenber (Short)	3.10	3.65	6	3 1/8	3 1/8	3/4	1 1/2	3–3/16	17
*D-55	Studebaker	3.70	4.35	6	3 1/2	4	7/8	1 25/32	3–3/16	32
D-56	Studebaker	3.80	4.50	6	3 7/8	4 11/16	1 1/8	2 11/32	4–3/16	39 1/2
*D-57	Studebaker	3.75	4.40	6	3 7/8	4 11/16	1	2 11/32	4–1/16	40 1/2
D-58	Studebaker Lt. Six	2.65	3.10	6	3 1/8	3 3/8	11/16	1 15/16	3–3/16	19 1/2
*D-58-B	Studebaker Lt. Six (Late)	3.20	3.75	6	3 1/8	3 3/8	11/16	1 15/16	4–3/16	27
D-59	Allen 41	4.50	5.30	4	3 3/4	4 1/2	7/8	2 1/4	3–1/4	44
D-60	Allen 37	4.50	5.30	4	3 3/4	4 1/2	1	2 1/4	3–1/4	41
*D-61	White Truck GK	4.50	5.30	4	3 3/4	4 3/4	1 1/64	2 23/32	3–1/4	42
*D-61-S	White Truck (Short) GK	4.50	5.30	4	3 3/4	4 3/8	1 1/64	2 23/32	3–1/4	40
*D-61-4R	White GK	4.50	5.30	4	3 3/4	4 3/4	1 1/64	2 23/32	3–3/16, 1–1/4	41
*D-62	White Truck GEC	5.60	6.60	4	4 1/4	5	1 1/64	2 3/8	3–1/4	59
D-63	Dodge	2.95	3.25	4	3 7/8	4 3/16	13/16	2 3/16	3–3/16	34
D-64	Chevrolet	2.60	3.05	4	3 11/16	3 5/8	.850	1 7/8	3–3/16	30
D-65	Reo	4.30	5.05	4	4 1/8	4 13/16	1.235	2 13/32	3–1/4	42 1/2
D-67	Overland 79-80-83-83B-84B	3.60	4.25	4	4 1/8	4	7/8	2	3–1/4	36
D-68	Overland 90	3.15	3.70	4	3 3/8	4	7/8	2 1/32	4–3/16	25 1/2
D-69	Essex	3.25	3.80	4	3 3/8	3 9/16	7/8	1 27/32	3–3/16	22
D-71	Mitchell E40	3.40	4.00	6	3 1/4	4	23/64	1 13/16	3–3/16	24
D-72	Mitchell C-E-F-42	3.70	4.35	6	3 1/2	4 7/16	23/64	1 13/16	3–1/4	27
D-72-A	Mitchell C E, F-42	3.70	4.35	6	3 1/2	4 7/16	23/64	1 13/16	3–3/16	28
D-73	Hercules—Truck Motor	4.70	5.55	4	3 3/4	4 7/8	1 1/8	3	4–3/16	52
D-74	Hercules—Truck Motor	4.85	5.70	4	4	4 7/8	1 1/8	3	4–3/16	63
D-75	Hercules—Truck Motor	5.30	6.25	4	4 1/4	5 1/8	1 1/4	2 3/4	4–3/16	69
D-76	Hercules—Truck Motor	5.65	6.65	4	4 1/2	5 1/8	1 1/4	2 3/4	4–3/16	76

For Alphabetical list, see pages 135-137.

Replacement Piston Prices—Continued

Cat. No.	For Car or Motor	List Pr. Semi-Finished	List Price Finished	No. Cyl.	Dia.	Length	Dia. Wrist Pin Hole	Compression	Ring Grooves	Wt. Oz. Stand. Size
D-77	Cadillac 51	3.10	3.65	8	3 1/8	3 5/16	21-32 - 5/8	1 7/16	3-3/16	19
D-78	Lycoming Motor	3.35	3.95	4	3 1/2	4	7/8	2	3-3/16	27
D-79	Lycoming Motor	3.15	3.70	4	3 1/4	4	7/8	2	3-3/16	24 1/2
D-80	Herschell-Spillman Motor	3.25	3.80	4	3 1/2	3 3/8	7/8	1 7/8	3-3/16	24
D-81	Herschell-Spillman Motor	3.05	3.60	4-6-8	3 1/4	3 1/2	7/8	2	3-3/16	22
D-82	Nash	3.25	3.80	6	3 1/4	4	13/16	1 5/8	4-1/16	23
D-83	Nash 4	3.25	3.80	4	3 3/8	3 1/2	13/16	1 5/8	4-1/8	.....
D-84	Overland 75B	3.40	4.00	4	3 3/8	4	7/8	2 1/32	4-3/16	25 1/2
D-86	Cole 8	3.80	4.50	8	3 1/2	4 3/8	.855	2 1/8	4-3/16	24
D-87	Cunningham 8	4.30	5.05	8	3 3/4	4 3/4	13/16	2 1/4	3-3/16	26 1/2
*D-88	Studebaker Special Six	3.60	4.25	6	3 1/2	4 3/4	1	2 9/16	4-3/16	37
*D-89	Haynes	3.50	4.10	6	3 1/2	4 1/2	1	2 3/8	4-3/16	36
D-90	Haynes	3.30	3.90	6	3 1/2	4 1/2	1	2 3/8	4-3/16	28
D-91	White Truck GO	4.50	5.30	4	3 3/4	5 3/8	1 3/16	2 11/16	3-1/4	45
D-92	White Truck GN	5.40	6.35	4	4 1/4	5 3/8	1 3/8	2 11/16	3-1/4	54 1/2
D-93	Vim Truck	3.60	4.25	4	3	4 1/2	55/64	2 1/4	3-3/16	21
*D-95	Stearns-Knight	4.95	5.85	4	3 3/4	4 15/32	31/32	2 19/32	3-3/16	37
D-96	Peerless 56 Series 5 & 6	3.25	3.80	8	3 1/4	3 3/16	7/8	1 11/16	3-3/16	17
D-97	Cleveland 40	3.00	3.50	6	3	3 1/2	27/32	1 1/8	3-3/16	18 1/2
D-98	Falls Motor	3.05	3.60	6	3	3 1/4	.740	1 1/2	3-3/16	17
D-99	Falls Motor	3.05	3.60	6	3	3 1/2	.740	1 7/8	3-3/16	18
D-100	Fordson Tractor	3.50	4.10	4	4	4 7/8	1 3/8	2 5/16	3-1/4	48
D-101	White Late 3-5 Tr	5.50	6.35	4	4 1/4	5 3/8	1 3/16	2 11/16	3-1/4	52
D-102	Stutz S, H, SG	5.65	6.65	4	4 3/8	5 11/16	1 1/8	3 1/16	3-1/4	55
D-103	Overland Lt. 4	2.35	2.75	4	3 3/8	3 1/2	47/64	1 7/8	3-3/16	22
D-104	Hupmobile R	3.25	3.80	4	3 1/4	3 7/16	.865	2	3-3/16	20 1/2
D-105	Hupmobile N	3.80	4.45	4	3 3/4	3 7/8	.9275	2 1/4	3-3/16	37
D-106	Franklin 9-9B (Off Set)	3.60	4.25	6	3 1/4	4	7/8	2 3/8	3-3/16	22
D-107	Franklin 9-9B	3.60	4.25	6	3 1/4	4 1/16	7/8	2 5/32	3-3/16	23 1/2
*D-108	Erd Tractor Motor	5.40	6.35	4	4 1/4	4 1/2	1 7/32	2 13/32	3-1/4	62
D-109	Stevens Duryea	6.00	7.05	6	4 7/16	5 1/16	1	2 1/16	3-1/4	52
D-110	Pierce Arrow C-4-38	4.95	5.85	4	4	4 3/4	1 1/16	2 1/2	4-1/4	42
D-110	Pierce Arrow X4, X5 Tr	4.95	5.85	4	4	4 3/4	1 1/16	2 1/2	4-1/4	42
D-115	Republic Truck	3.25	3.80	4	3 1/4	3 5/8	1 1/16	2 1/8	3-3/16	23 1/2
D-116	Republic Truck	3.40	4.00	4	3 1/2	3 5/8	1 1/16	2 1/8	3-3/16	27
D-117	Continental	4.05	4.75	4	3 3/4	5	1 7/32	2 13/32	3-3/16	37
D-118	Continental	4.05	4.75	4	3 3/4	5 1/8	1 7/32	2 13/32	3-3/16	40
D-119	Continental 8R	3.25	3.80	6	3 3/8	4 15/16	55/64	2 7/16	3-3/16	24 1/2
D-120	Continental E4	4.80	5.65	4	4 1/2	5 5/8	1 7/16	2 13/16	3-1/4	62
D-121	Buda	4.15	4.90	4	3 3/4	5	1 1/16	2 1/2	4-3/16	43
D-122	Buda CTU	4.05	4.75	4	3 3/4	5	1	2 3/8	4-3/16	47
D-123	Buda MU	4.00	4.70	4	3 5/8	4 1/2	1 1/16	2 1/16	4-3/16	43
D-124	Buda OU	4.95	5.85	4	4 1/8	5 3/8	1 1/16	2 7/32	3-1/4	66
D-125	Buda HU	5.30	6.25	4	4 1/4	5 3/8	1 1/8	2 5/8	4-1/4	65
D-126	Buda WTU	4.05	4.75	4	3 3/4	4 1/2	1 1/16	2 1/16	4-3/16	37
D-127	Buda YTU	5.85	6.90	4	4 1/2	6 1/4	1 1/4	3	4-1/4	72
†D-130	Autocar Truck, 21F, UF, UG	5.85	6.90	2	4 3/4	4 3/4	1 9/32	2 1/16	4-5/16	61
D-130-B	Autocar Truck, 21F, UF, UG	5.85	6.90	2	4 3/4	4 3/4	1 1/8	2 1/16	4-5/16	61
D-132	Continental B	6.10	7.20	4	4 3/4	6 1/8	1 3/8	3 1/2	3-1/4	96
*D-133	Stephens	3.25	3.80	6	3 1/4	3 5/8	1	1 7/8	3-3/16	25
D-134	Grant H 1920-22	3.15	3.70	6	3 1/8	4	7/8	2 3/8	3-3/16	25
D-135	H. C. S. Ser. 1-2-3, 1920-21	4.05	4.75	4	3 5/8	4 9/16	1	2 1/16	3-1/4	32
D-136	Weidley (Early Cleveland Tractor)	4.50	5.30	4	3 3/4	4 9/16	1	2 1/16	3-1/4	33
D-137	Weidley Motor	5.05	5.95	4	4	4 1/2	1	2 3/8	4-1/4	51
*D-138	Midwest (Bates Steel Mule H15-25, F18-25)	7.00	8.25	4	4 1/8	5 1/8	1 1/8	2 1/4	3-1/4	79
D-139	Stephens 1923-24	3.15	3.70	6	3 1/4	3 5/8	1	2 1/8	3-3/16	24
D-140	Continental 6SA	3.15	3.70	6	3 3/8	3 13/16	55/64	2 5/16	3-3/16	27
D-141	Continental 6Y	3.05	3.60	4 & 6	3 1/8	3 1/4	3/4	1 13/16	3-3/16	21
D-142	Continental (Paige 6-66)	3.80	4.45	6	3 3/4	4 1/2	1 1/8	2 5/8	3-3/16	.....
D-145	Paige 6-42, Jewett	3.15	3.70	6	3 1/8	4	1	2 3/8	3-3/16	23
D-146	Paige (Rebore), Jewett	3.25	3.80	6	3 1/4	4	1	2 3/8	3-3/16	25
D-147	Continental J4	4.05	4.75	4	3 3/4	4 7/8	1 1/8	2 15/16	4-3/16	41
D-148	Continental K4	4.95	5.85	4	4 1/8	5 7/16	1 1/4	3 3/8	4-1/4	54
D-149	Continental L4	5.05	5.95	4	4 1/2	5 15/16	1 3/8	3 5/8	4-1/4	77
D-151	King F & G, 1918-19	3.25	3.80	8	3	3 1/4	3/4	1 7/8	2-3/16	21
D-152	Buick B25, C24, C25	3.25	3.80	4	3 3/4	4 1/4	.740	1 7/16	3-3/16	36
*D-153	Buick C36, 37, B, C & D54, 55	4.05	4.75	6	3 3/4	.....	.925	2	3-3/16	45
*D-155	Durant A-22	3.60	4.25	4	3 3/4	3 5/8	.850	1 7/8	3-3/16	32
D-156	Anstead (Durant B-22 Lexington)	3.25	3.80	6	3 1/4	3 1/2	7/8	2 1/32	3-3/16	20
D-157	Lycoming (Gardner Series 5)	4.15	4.90	4	3 11/16	4 1/8	1 1/8	2 1/8	4-1/8	.....
D-158	Overland Red Bird	3.25	3.80	4	3 1/2	3 1/2	47/64	1 3/8	3-3/16	.....
D-160	Wisconsin A	6.10	7.25	4	4 3/4	6 1/4	1 1/16	3	3-1/4	71
*D-160-B	Wisconsin A	7.00	8.25	4	4 3/4	6 1/4	1 3/16	3	3-1/4	71
D-183	Saxon (OLD4)	3.15	3.70	4	2 3/4	3	5/8	1 5/16	3-3/16	18 1/2
D-506	King H 1920	3.25	3.80	8	3	3 1/4	7/8	1 7/8	2-3/16	20

*Items thus marked are supplied with High Quality Bronze Bushings in wrist pin holes.

Dall Pistons are regularly furnished in the following finished sizes: Standard, .003, .005, .010, .015, .020, .030, .040; also .0625 on pistons 3 3/4" or larger, ground. Semi-finish at 1/16" (.062) and .080" oversize complete except grinding. Other oversizes furnished for factory shipment.

†No. D-130 Autocar Piston is furnished with 2 sizes of holes for step pin 1 1/16x1 1/8. However, many are used with straight 1 1/8" pin. For convenience we have listed this as No. D-130-B.

Be sure to specify correct catalog number required on your orders.

Piston Pins

These Piston Pins are made from a special high grade steel and are accurately machined on the latest improved machines, properly heat treated by a scientific process and ground to absolute accuracy. They are guaranteed in all respects. We will replace without charge any pin found to be defective in size, finish or quality. Furnished in standard, .003, .005 and .010 oversizes. Larger oversizes furnished on special order. Packed one set in a box, plainly marked with size and oversize.

For Passenger Cars

Code No.	Cyl.	Model	Year	Size	Each
		ALLEN			
AM	4	37-41	1916-18	1.000x3 1/8	.90
AN	4	43	1919-22	.875x3 1/16	.85
		AMERICAN			
CU	6	AB	1916-20	.750x2 3/4	.75
A	6	B'ty E.-G.-F.	1918-20	.875x3 1/16	.66
EX	6	C-60	1920-23	.875x3	.90
		ANDERSON			
A	6	200	1917-19	.875x3 1/16	.66
C	6	30	1920-22	.860x3 1/16	.66
FH	6	40	1922-23	.859x3	.72
		APPERSON			
AU	6	All	1915	1.000x3 1/2	1.20
AR	6	All	1916-18	1.2185x3	1.06
AO	8	All	1916-18	.9375x2 3/4	.90
AP	8	All	1919-22	.9375x2 7/8	.90
		AUBURN			
TT	6		1913-18	1.000x2 5/8	1.06
B	6	6-40, 40A, 44	1914-17	1.0937x3 1/4	.72
CU	6	6-39	1914-19	.750x2 3/4	.75
A	6	6-39K-39H-30	1917-20	.875x3 1/16	.66
D	6	6-44	1917-22	1.1565x3 1/4	.72
C	6	HR 39-51 Beauty Six	1917-22	.860x3 1/16	.66
FG	6	6-43	1923-24	.750x2 11/16	.60
		BEGGS			
C	6	18T-19T-20T	1918-22	.860x3 1/16	.66
		BRISCOE			
J	4		1916	.750x3 1/4	.58
AS	4	4-24	1917-19	.750x2 3/4	.75
AT	4	4-34-T34	1918-21	1.000x2 13/16	.75
		BUICK			
EP	4	28-29-30-31	1913	1.000x3 3/4	1.20
DP	4	B24-25-32-3-4-5-6-C24-25	1913-15	.740x3 3/16	.75
DR	4-6	C-36-37-54-D54-55	1914-16	.927x3 13/32	.72
E	6	D44 to 47 Heavy	1916-17	.875x2 13/16	.58
G	6	D44 to 47 Light	1916-17	.750x2 13/16	.58
F	4	E-D-H-34-35-37	1916-18	.750x3 1/16	.58
DS	6	E-H-K 44 to 50	1918-20	.750x3 1/16	.58
AZ	4	34-5-6-7	1922-24	.750x3 3/32	.58
DT	6	44 to 50	1921-24	.9677x3 1/16	.72
E	6	44-51-54	1924	.875x2 13/16	.58
AZ	4	33-34-35-37	1924	.750x3 3/32	.58
		CADILLAC			
BD	8	53	1916	.625x3	.76
BC	8	55-57-59-61	1917-23	.750x2 7/8	.76
GB	8	V61-V63	1923-24	.7495x2 13/16	.72
		CASE			
RJ	4		1915	1.000x3 1/2	1.20
B	6	6-50	1918	1.0937x3 1/4	.72
D	6	U-V	1917-22	1.1565x3 1/4	.72
FP	6	W-Y	1922-23	1.125x3 1/4	1.06
FH	6	X	1922-23	.859x3	.72
		CHALMERS			
BA	6	32A-B	1915-16	.8125x2 13/16	.85
AH	6	35A-B	1916-19	.8125x3 1/16	.82
R	6	35C-D	1920-21	.8125x2 23/32	.80
EZ	6	35C-D	1922-23	.8125x2 7/8	.90
		CHAMPION			
CA	4	KO Tour.	1919-23	.875x3 1/4	.80
BM	4	KO-Spec.	1920-23	.875x3 1/4	.90
		CHANDLER			
T	6	NS6	1917-18	.750x3 1/4	.70
AY	6	NS6	1919	.750x3 1/2	.75
U	6	6-30	1919-22	.9687x3 1/4	.72
FT	6		1923	.9685x2 31/32	.76

Code No.	Cyl.	Model	Year	Size	Each
		CHEVROLET			
S	4	D4-5	1917-19	.850x3 1/16	.58
H	4	490-FA-FB Baby Grand	1914-22	.850x3 5/16	.58
DZ	4	Superior 490	1922-24	.850x3 5/16	.60
		CLEVELAND			
DU	6	40-42	1920-23	.8437x2 13/16	.72
		COLE			
ER	6	6/50-60-70-80-90	1915-16	1.000x3 1/16	1.00
CC	8	8/50-60-70-80-90	1916-23	.855x3 1/4	.85
		COLUMBIA			
A	6	DE-DC-DSF	1917-19	.875x3 1/16	.66
CU	6	46-R	1919-23	.750x2 3/4	.75
C	6	20C-D-E	1920-23	.860x3 1/16	.66
FG	6	6	1923-24	.750x2 11/16	.60
FH	6	Elite	1923-24	.859x3	.72
		COMET			
B	6	C-51	1917	1.0937x3 1/4	.72
D	6	C50-52-53	1918-23	1.1565x3 1/4	.72
FP	6	C53-2	1923-24	1.125x3 1/4	1.06
		CROW ELKHART			
CA	4	CE33-35-L53-54-55-65	1916-22	.875x3 1/4	.80
CU	6	E45-46	1919-21	.750x2 3/4	.75
EX	6	S63-65	1921-22	.875x3	.90
		DAVIS			
A	6	E to P	1916-19	.875x3 1/16	.66
B	6	J-JL	1916-18	1.0937x3 1/4	.72
D	6	JM	1917-19	1.1565x3 1/4	.72
C	6	51-55-57	1919-22	.860x3 1/16	.66
FH	6	61 to 67	1922-23	.859x3	.72
FG	6	71-76	1923	.750x2 11/16	.60
		DIXIE FLYER			
FF	4	36	1917	.875x3 3/8	1.06
EM	4	L-S	1915-18	.875x3	.75
BM	4	HS 70	1919-22	.875x3 1/4	.90
		DODGE			
AA	4	All	1915-24	.8125x3 11/16	.54
		DORT			
EM	4	5-5A-6-9	1915-17	.875x3	.75
CA	4	17A-8-10-11-15-39	1917-23	.875x3 1/4	.80
FL	6		1923-24	.750x2 7/8	.76
		DURANT			
BY	4	A	1921-24	.8495x3 1/2	.80
BW	6	B	1921-24	.875x2 7/8	.90
		EARL			
AT	4	4-40	1922-24	1.000x2 13/16	.75
		ECONOMY			
C	6	46	1919-20	.860x3 1/16	.66
FF	4	36	1920	.875x3 3/8	1.06
A	6	45-46	1920-21	.875x3 1/16	.66
		ELCAR			
A	6	D-E-G-H-K	1916-19	.875x3 1/16	.66
CA	4	D-E-F-G-H-K	1917-23	.875x3 1/4	.80
C	6	D-E-F-G-H-K	1919-21	.860x3 1/16	.66
FH	6	6	1922-24	.859x3	.72
		ELGIN			
BF	6	All	1917-22	.740x2 5/8	.76
		ESSEX			
AK	4	A	1918-24	.875x2 23/32	.75
		FORD			
AL	4	T	1909-24	.740x3 1/2	.42
		FRANKLIN			
EK	6	3-4-5-6-7-8	1913-16	1.000x3 1/4	.78
AF	6	9	1917-22	.875x2 7/8	.75
AJ	6	10	1922-24	.875x2 7/8	.70
		GARDNER			
CA	4	G-T	1920-22	.875x3 1/4	.80

Piston Pins—Continued

For Passenger Cars—Cont'd

Code No.	Cyl.	Model	Year	Size	Each
		GRANT			
BF	6	TV-KG-H-HY	1915-21	.740x2 5/8	.76
BG	6	HX-HZ	1921-23	.875x2 1/8	.76
		GRAY			
FX	4	All	1922-24	.740x3 1/4	.60
		HAYNES			
BJ	6	30-3-4-5-6-7	1915-17	1.000x3 1/8	.90
DX	6	38-39	1918	1.000x3 1/8	.90
BK	12	40-1-3-4-6-8	1917-22	.875x2 7/16	.76
BL	6	45-47-50-55	1919-21	1.000x3 1/8	.90
EH	6	57-75-77	1921-23	1.125x3 1/8	1.06
FM	6	55		1.000x3 1/4	.90
		H. C. S.			
DA	4	Series 2-3-4	1920-23	1.000x3 1/4	1.06
		HOLMES			
BH	6	1-2	1918-19	1.000x3 1/8	.90
BB	6	3-4	1920-23	.875x2 1/8	.76
		HUDSON			
AU	6	20	1909-10	1.000x3 1/2	1.20
TH	6	6-37-45-54	1913-16	1.2175x3 1/8	1.00
B	6	6-40	1914-16	1.0937x3 1/4	.72
X	6	Super Six	1917-21	1.0937x3 1/16	.90
CX	6	Super Six	1922-24	1.0937x2 11/16	.90
		HUPMOBILE			
CO	4		1913-14	.7345x2 7/8	.65
BN	4	K	1915	.865x2 1/8	.76
BO	4	N	1916-17	.9285x3 7/16	.90
BP	4	R	1918-23	.865x2 1/8	.76
		IMPERIAL			
CU	6	66 All		.750x2 3/4	.75
		JACKSON			
ER	6	Olympia	1915-16	1.000x3 1/8	1.00
CC	8	349-350	1917-19	.855x3 1/4	.85
A	6	38	1919-20	.875x3 1/16	.66
C	6	55	1920-22	.860x3 1/16	.66
		JEWETT			
AE	6	6	1922-24	1.000x2 3/4	.82
		JORDAN			
B	6	M-N	1917-18	1.0937x3 1/4	.72
A	6		1918-19	.875x3 1/16	.66
C	6	M	1919-22	.860x3 1/16	.66
D	6	FX-J60	1919-22	1.1565x3 1/4	.72
BZ	6	MX-H-L	1922-23	.8595x2 7/8	.80
		KING			
BT	8	CD	1915	.625x2 5/8	.85
BU	8	DE-E-F-G	1916-22	.750x2 1/16	.85
		KISSELL			
FC	6	6-42	1915-18	1.125x3 3/8	1.20
BS	6	100 Pt.	1917-20	.875x3	1.00
BS	6	Custom Built	1919-22	.875x3	1.00
GD	6	45	1920-22	.875x3 1/16	1.00
GE	6	55	1923-24	.9375x3 3/64	1.00
		KLINE KAR			
A	6	F-38-H-42	1917-19	.875x3 1/16	.66
C	6	J-55K	1920-22	.860x3 1/16	.66
FH	6	6-60L	1923-24	.859x3	.72
		LEXINGTON			
B	6	L-N	1915-17	1.0937x3 1/4	.72
A	6	R	1916-20	.875x3 1/16	.66
C	6	S	1919-22	.860x3 1/16	.66
BW	6	T-TS-U	1921-23	.875x2 7/8	.90
		LIBERTY			
A	6	10A-B	1916-22	.875x3 1/16	.66
V	6	10C	1921-23	.875x2 3/4	.80
		LINCOLN			
HU	8	All	1921-24	.875x3 1/8	.85
		LOCOMOBILE			
B	6	6-48, 2-48, L	1913-23	1.125x4 1/4	1.20
D	6	6-38, N, 2-38	1913-22	.9375x4	1.20
		MAIBOHM			
BF	6	B	1918-22	.740x2 5/8	.76
		MARION HANDLEY			
U	6	A-H-K	1916-18	.750x2 3/4	.75
	6	B40-60	1916-19	1.1565x3 1/4	.72
		MARMON			
U	6	41	1914-15	1.125x3 7/8	1.20
H	6	34	1916-19	1.125x3 1/4	1.06
D	6	34	1920-24	1.875x3 1/4	1.06
		MAXWELL			
	4	25	1914-21	.750x3 1/4	.58
A	4	25	1922-24	.750x3	.58

Code No.	Cyl.	Model	Year	Size	Each
		McFARLAN			
EJ	6	All	1913-24	1.000x4	1.20
		McLAUGHLIN			
M	6	60		.668x2 9/16	.56
N	6	63		.668x2 7/16	.56
		MERCER			
CG	4	Series 5	1915-24	1.000x3 3/32	1.06
		METZ			
CU	6	Master 6	1917-22	.750x2 3/4	.75
		MITCHELL			
CJ	6	D-E-F40	1916-22	.9845x2 7/8	.96
CK	6	D-E-F-42-50	1916-23	.9845x3 1/16	1.00
		MOLINE KNIGHT			
CE	4	G	1918	1.2475x3 5/8	1.30
CF	4	MK40-C-L-J	1915-19	.999x3 5/16	1.00
		MONITOR			
TB	4	CN	1915-17	1.0937x3 7/16	.80
A	6	M-N-O	1916-20	.875x3 1/16	.66
C	6	Series 3	1920-22	.860x3 1/16	.66
		MONROE			
BX	4	M3	1916-18	.740x2 9/16	.70
		MOON			
A	6	6-45-48	1916-19	.875x3 1/16	.66
B	6	6-60-66-68	1917-20	1.0937x3 1/4	.72
C	6	48 Victory	1919-22	.860x3 1/16	.66
D	6	43	1917-22	1.1565x3 1/4	.72
FG	6	L6-6-40	1922-24	.750x2 1/16	.60
		NASH			
CL	6-4	681-687	1916-20	.9375x2 15/16	.80
CY	6-4	All	1921-24	.9375x3	.80
		NATIONAL			
AU	6	AA-AB	1914-15	1.000x3 1/2	1.20
B	6	AF-AL	1916-19	1.0937x3 1/4	.72
D	6	AC	1916-22	1.1565x3 1/4	.72
CM	6	Sextette	1920-23	1.0937x3 1/16	1.06
BM	4	4	1923	.875x3 1/4	.90
		OAKLAND			
CN	6	35-67-8-48-9-50	1913-17	.855x3 5/16	.85
M	6	32-32A-B-34	1916-17	.668x2 9/16	.56
N	6	34B-C-44	1918-23	.668x2 7/16	.56
GC	6	24	1924	.730x2 1/16	.60
		OLDSMOBILE			
CC	6	43	1915	.855x3 1/4	.85
N	6	37-37A-37B	1919-22	.668x2 7/16	.56
M	8	44-45-45AB-46-47	1916-22	.668x2 9/16	.56
DZ	4	43A	1920-23	.850x3 5/16	.60
FZ	6	30	1924	.855x2 11/16	.54
		OVERLAND			
D	6	82-86-88-89	1916	1.1565x3 1/4	.72
B	6	82-86-88-6, 89-6	1917-19	1.0937x3 1/4	.72
L	4	59-69-79-81-3-5	1916-17	.875x3 3/4	.72
A	6	85-6	1917-19	.875x3 1/16	.66
W	4	75B	1917	.875x3 3/32	.66
K	4	90	1917-19	.875x3 1/8	.66
CO	4	Baby Four	1919-23	.7345x2 7/8	.65
FW	4	Red Bird	1923-24	.735x3 1/8	.72
		PACKARD			
CP	12	1-25, 1-35	1916	.6875x2 11/16	.76
CR	12	2-25, 2-35	1917-23	.750x2 3/4	.90
CS	6	Single Six.	1920-23	.750x3 1/8	.90
CS	8	136-143	1923-24	.750x3 1/8	.90
		PAIGE			
B	6	46-51-55	1914-18	1.0937x3 1/4	.72
CU	6	36-38-39-40	1916-19	.750x2 3/4	.75
D	6	55	1919-21	1.1565x3 1/4	.72
EL	6	66	1920-22	1.125x3 7/8	.90
AE	6	42-44	1917-22	1.000x2 3/4	.82
FY	6	6-70	1923-24	1.125x3 5/16	.90
		PEERLESS			
DY	8	All	1916	.875x3	1.00
DW	8	All	1917-23	.875x3	.85
		PIERCE ARROW			
EA	6	38	1916-20	1.0625x3 3/4	1.20
EF	6	48	1916-18	1.125x4 5/16	1.30
EB	6	38 Sq. Slot	1916-18	1.0625x3 3/4	1.30
ED	6	48 Dual Valve	1919-20	1.125x4	1.30
EG	6	32-33	1921-23	1.0625x3 1/2	1.20
		PILOT			
TT	6	45	1921-23	1.000x2 5/8	1.06
EX	6	50	1921-23	.875x3	.90

Piston Pins—Continued

For Passenger Cars—Continued

Code No.	Cyl.	Model	Year	Size	Each
		PREMIER			
CT	6	B-C-D-G	1917-23	.859x3 5/16	1.00
		REO			
AC	6	M-N	1916-18	1.235x3 1/8	1.20
AB	4	R-S-T-U	1916-19	1.235x3 5/8	1.20
DE	6	T6	1920-23	.9845x2 7/8	.72
RU	4	T	1921-23	1.225x3 5/16	1.00
		RICKENBACKER			
FE	6	All	1921-24	.750x2 11/16	.90
GH	6		1924	1.000x2 31/32	1.20
		ROAMER			
CU	6	6-45	1916-18	.750x2 3/4	.75
B	6	D6-90	1917-18	1.0937x3 1/4	.72
D	6	6-54	1919-22	1.1565x3 1/4	.72
		R. & V. KNIGHT			
CF	4-6	R-J	1920-23	.999x3 5/16	1.00
		SAXON			
DH	4-6	All	1916-20	.625x2 1/2	.65
DF	6	Square Slot	1916-20	.625x2 1/2	.65
DG	4	D-125	1920-22	1.000x2 13/16	.82
		SAYERS			
TH	4		1912-15	1.2175x3 1/8	1.00
A	6	AP-BP-CP	1917-20	.875x3 1/16	.66
D	6	C-D-E-G	1918-21	1.1565x3 1/4	.72
C	6	DP	1916-22	.860x3 1/16	.66
FH	6	DP	1923	.859x3	.72
		SCRIPPS BOOTH			
BX	4	C-H	1915-17	.740x2 5/16	.70
N	6	39B-39-40-1-2	1916-22	.668x2 7/16	.56
H	4	G	1917-19	.850x3 5/16	.58
C	6	F	1921-22	.860x3 1/16	.66
		SEVERIN			
D	6	H	1919-22	1.1565x3 1/4	.72
		STAR			
FR	4	Solid	1922-24	.750x2 3/4	.60
FF	4	B	1918-19	.875x3 3/8	1.06
		STEARNS			
TT	6	All	1911-13	1.000x2 5/8	1.06
		STEARNS KNIGHT			
DD	4	All	1916-23	.9687x3 5/16	1.25
DJ	8	All	1916-22	.750x2 13/16	.90
FS	6	6	1923-24	.968x3	.90
		STEPHENS			
A	6	16	1916	.875x3 1/16	.66
DL	6	Salient 6-10-20	1917-23	.999x2 11/16	.90
		STUTZ			
DB	4	A-B-C-D-E-F-R	1914-17	1.1875x4 5/16	1.25
CW	4	D-G-H-K-KL	1918-22	Spec. 1.125x3 3/4	1.30
GA	6	All	1923-24	.875x3 5/16	.84

Code No.	Cyl.	Model	Year	Size	Each
		STUDEBAKER			
FD	4	SC-SD	1914-15	.8745x3 1/16	.75
O	4	SH	1919-22	1.000x3 1/16	.75
P	4	SF	1916-18	1.125x3 5/16	.85
O	6	Spec. 6	1919-24	1.000x3 1/16	.75
P	6	Big 6	1916-22	1.125x3 5/16	.85
FJ	6	Big Six	1923-24	1.000x3 1/16	.84
DK	6	Light Six	1921-24	.6875x2 13/16	.75
		TEMPLAR			
DM	4	4-45	1918-22	1.000x3	1.00
		TEXAN			
CA	4	37A-38 A-B-D	1918-22	.875x3 1/4	.80
BM	4	Special 12	1920-21	.875x3 1/4	.90
		TULSA			
CA	4	D1	1918	.875x3 1/4	.80
BM	4	D-E	1920-22	.875x3 1/4	.90
EX	6	F1-2-3	1921	.875x3	.90
		VELIE			
D	6	539	1915-19	1.1565x3 1/4	.72
A	6	22-28-38	1915-19	.875x3 1/16	.66
B	6	15-27-37	1915-19	1.0937x3 1/4	.72
C	6	48	1916-22	.860x3 1/16	.66
BF	6	34	1920-22	.740x2 5/8	.76
FB	6	34-58	1922-23	.8745x2 7/8	.80
		WASHINGTON			
BF	6	Jr.	1921	.740x2 5/8	.76
C	6	B	1922	.860x3 1/16	.66
FH	6	C	1922	.859x3	.72
		WESTCOTT			
TT	4	All	1913-14	1.000x2 5/8	1.06
A	6	A38-B38	1916-19	.875x3 1/16	.66
B	6	17-18-50	1918-22	1.0937x3 1/4	.72
C	6	C38	1919-22	.860x3 1/16	.66
D	6	A48-C48	1920-22	1.1565x3 1/4	.72
FH	6	A44-B44	1922-23	.859x3	.72
ES	6	48	1923-24	1.000x2 3/4	.76
		WILLS ST. CLAIRE			
ET	8	A68	1921-23	.6875x3 1/16	.85
		WILLYS			
A	6	6	All	.875x3 1/16	.66
		WILLYS KNIGHT			
DO	8	88-8	1917-20	.9375x3 1/16	1.10
DN	4	88-4	1917-20	1.0625x3 3/4	1.20
FK	4	20-27	1920-23	.9375x3 1/4	.96
		WINTON			
Z	6	20-21-22-24	1914-22	1.125x4	1.20
AG	6	21A-22A-25A	1914-22	1.000x2 7/16	1.20
		YELLOW CAB			
TB	4	All	1920	1.0937x3 7/16	.80
UG	4	M	1921-24	1.0937x3 3/8	.80

For Motor Trucks

Code No.	Cyl.	Model	Tonnage	Year	Size	Each
		ACME TRUCK				
TB	4	G-BF	3/4-1-1 1/2	1915-23	1.0937x3 7/16	.80
TH	4	A	2	1916-21	1.2175x3 1/8	1.00
RA	4	F-40	1 1/2-2	1921-23	1.1245x3 7/16	1.14
SW	4	4OL-60	2-2 1/2	1923	1.2495x3 1/16	1.30
ST	4	AC-C	2 1/2-3 1/2	1919-22	1.375x4	1.25
ST	4	K-Bus-60-L-90	3-4	1922-23	1.375x4	1.25
TJ	4	C-D	3 1/2-4	1919-20	1.4365x4 1/8	1.20
TG	4	E-125, 90L	4-5	1919-23	1.375x4 7/16	1.20
		ARMLEADER TRUCK				
TB	4	20	1	1920-21	1.0937x3 7/16	.80
TL	4	20-21B	1-1 1/2	1919-23	1.0625x3 1/4	1.06
TH	4	40C-HWC	1 1/2-2 1/2	1915-23	1.2175x3 1/8	1.00
TX	4	40B-HWB	1 1/2-2 1/2	1921-23	1.125x3 1/16	1.06
WE	4	21B	1 1/2	1923	1.0625x3	1.20
TJ	4	KWC	3 1/2	1921-23	1.4365x4 1/8	1.20
RC	4	KWB	3 1/2	1921-23	1.250x3 7/8	1.30
		ATLAS TRUCK				
B	4	18	3/4	1918-19	1.0937x3 1/4	.72
CA	4	19-21 Merchants Despatch	3/4-1	1919-22	.875x3 1/4	.80
TL	4	22-25-40-44	1-1 1/4-1 1/2	1922-23	1.0625x3 1/4	1.06

Code No.	Cyl.	Model	Tonnage	Year	Size	Each
		BETHLEHEM TRUCK				
TA	4	4	1-1 1/2	1916-19	1.125x3 1/16	1.06
FF	4	A	1 1/2	1917-20	.875x3 3/8	1.06
		CHEVROLET TRUCK				
H	4	G-T	3/4-1-1 1/2	1918-21	.850x3 5/16	.58
DZ	4	All	1/2-3/4-1	1922-24	.850x3 5/16	.60
		COMMERCE TRUCK				
TB	4		3/4-1-1 1/4-1 1/2-2	1918-22	1.0937x3 7/16	.80
RA	4	14-B	1 1/2	1923	1.1245x3 7/16	1.14
TH	4	18	2 1/2	All	1.2175x3 1/8	1.00
SW	4	25-B	2 1/2	1923	1.2495x3 1/16	1.30
		DART TRUCK				
TB	4	E	1	1917-20	1.0937x3 7/16	.80
AU	4	S	1 1/2	1919-20	1.000x3 1/2	1.20
RT	4	S	1 1/2	1921-22	1.0625x3 1/4	1.06
TA	4	M	2 1/2	1919-23	1.125x3 1/16	1.06
RC	4	W	3 1/2	1919-23	1.250x3 7/8	1.30
		DEFIANCE TRUCK				
TB	4	All	1-1 1/2-2	1917-23	1.0937x3 7/16	.80
SW	4	H2-H12	3	1923	1.2495x3 1/16	1.30

Piston Pins—Continued

For Motor Trucks—Continued

Code No.	Cyl.	Model	Tonnage	Year	Size	Each
		DENBY TRUCK				
TS	4	A	¾	1914-16	.750x2⅞.	.76
B	4	12	1	1917-22	1.0937x3¼	.72
TB	4	31-H133-34	1¼-2	1917-23	1.0937x3 7/16	.80
TH	4	25-35	3	1917-22	1.2175x3⅛	1.00
SW	4	35	3	1923	1.2495x3 11/16	1.30
ST	4	27	4	1923	1.375x4...	1.25
TJ	4	27-210	4-5	1917-23	1.4365x4⅛	1.20
TG	4	210	5	1923	1.375x4 7/16.	1.20
		DEPENDABLE TRUCK				
RD	4	A	1-1¼	1921-23	1.0625x3⅛	1.06
TL	4	C	1½-2	1920-23	1.0625x3¼	1.06
WD	4	D	2½	1922-23	1.125x3 7/16.	1.10
TX	4	E	3	1919-23	1.125x3 11/16.	1.06
RC	4	G	3½	1919-23	1.250x3⅞.	1.30
		DIAMOND T TRUCK				
B	4	J	1	1916-19	1.0937x3¼	.72
TB	4	J	1½	1916-19	1.0937x3 7/16	.80
TN	4	TO3-T	1¼-1½	1920-23	1.125x3⅜.	1.20
TH	4	J3	2	1919-21	1.2175x3⅛	1.00
RO	4	U-TU	2-2½	1920-23	1.125x3⅝.	1.20
TJ	4		3½-5	1919-21	1.4365x4⅛	1.20
TO	4	K	3½	1920-23	1.249x3⅞.	1.30
TP	4	EL	5	1920-23	1.249x4⅛.	1.40
		DODGE TRUCK				
AA	4	All		All	.8125x3 11/16	.54
		DORT TRUCK				
CA	4		½	1920-23	.875x3¼.	.80
		FEDERAL TRUCK				
TB	4	SD	1	1918-20	1.0937x3 7/16	.80
RA	4	SD-R2-S21-22	1-1½	1921-23	1.1245x3 7/16	1.14
TH	4	TE-UE	1½-2	1919-23	1.2175x3⅛	1.00
SW	4	U2	2½	1923	1.2495x3 11/16	1.30
TJ	4	WE	3½	1919-23	1.4365x4⅛	1.20
ST	4	WL	4	1923	1.375x4...	1.25
TG	4	X2	5	1921-23	1.375x4 7/16.	1.20
TH	4	Light Duty Tract.		1919-22	1.2175x3⅛	1.00
SW	4	Light Duty Tract.		1923	1.2495x3 11/16	1.30
TJ	4	Heavy Duty Tract.		1919-22	1.4365x4⅛	1.20
ST	4	Heavy Duty Tract.		1923	1.375x4...	1.25
		FORD TRUCK				
AL	4	All		All	.740x3½.	.42
		FRONT DRIVE TRUCK				
RT	4	C	1½	1920	1.0625x3¼	1.06
TL	4	C	1½	1921-23	1.0625x3¼	1.06
		FULTON TRUCK				
FF	4		1	1916-17	.875x3⅜.	1.06
BM	4	A-C	1-2	1920-23	.875x3¼.	.90
RD	4	C	2	1922	1.0625x3⅛	1.06
BM	4	D Tractor		1921-23	.875x3¼.	.90
		GARFORD TRUCK				
RD	4	15	¾-1	1921-23	1.0625x3⅛	1.06
AU	4	75C	1	1918-19	1.000x3½.	1.20
RT	4	25B	1¼-1½	1919-23	1.0625x3¼	1.06
TX	4	70H	2-2½	1916-23	1.125x3 11/16.	1.06
DB	4	77C-68	3½-5	1915-19	1.1875x4 5/16.	1.25
RC	4	77D	3½-4	1920-23	1.250x3⅞.	1.30
SL	4	69	6	1915-18	1.1875x4⅝	1.60
WC	4	68D-150A	5-7½	1920-23	1.375x4 11/32.	1.50
		GARY TRUCK				
AU	4	F	1	1916-21	1.000x3½.	1.20
RT	4	F	1	1922-23	1.0625x3¼	1.06
SU	4	GT	1½	1921	1.125x3 7/16.	1.10
TA	4	I	2	1923	1.0625x3 11/16	1.06
TX	4	J	2½	1916-23	1.125x3 11/16.	1.06
RC	4	KT	3½	1919-23	1.250x3⅞.	1.30
WC	4	M	5	1921-23	1.375x4 11/32.	1.50
		GIANT TRUCK				
TB	4	15A	1½	1921-22	1.0937x3 7/16	.80
TH	4	16	2½	1921-23	1.2175x3⅛	1.00
TJ	4	17-18	3½-5	1921-23	1.4365x4⅛	1.20
		G. M. C. TRUCK				
B	4	15	¾	1916	1.0937x3¼	.72
TB	4	16-21-31	¾-1-1½	1917-19	1.0937x3 7/16	.80
UW	4	K16	1	1920-23	1.006x3 5/16.	.90
TH	4	40-41	2	1916-19	1.2175x3⅛	1.00
TJ	4		3½-5	1916-19	1.4365x4⅛	1.20
		GRAHAM BROS. TRUCK				
TB	4	Speed Truck	1½	1920-21	1.0937x3 7/16	.80
AA	4		1-1½	1922-23	.8125x3 11/16	.54
		GRAMM BERNSTEIN TRUCK				
CA	4	10	1	1921-23	.875x3¼.	.80
TB	4	15-65	1-1½	1919-23	1.0937x3 7/16	.80
TH	4	20	2	1919-22	1.2175x3⅛	1.00
SW	4	Pioneer 125	2-2½	1923	1.2495x3 11/16	1.30
TO	4	25-30	2½-3	1919-22	1.249x3⅞.	1.30
TP	4	35-75-40	3½-4	1920-23	1.249x4⅛.	1.40
TG	4	50	5	1919-23	1.375x4 7/16.	1.20
RM	4	2 Bushing	2½-3½-5-6	1916-18	1.250x3¾.	1.20
SR	4	1 Bushing	2½-3½-5-6	1916-18	1.250x4 7/16.	1.20
RA	4	11X	2	1923	1.1245x3 7/16	1.14
TG	4	17	2½	All	1.375x4 7/16.	1.20
WB	4	A12-12X	2½-3-3½	All	1.0625x3½	1.10
TK	4	T-TX	3-3½	All	1.0625x3 11/16	1.06
TJ	4	20-20A-B	3½	All	1.4365x4⅛	1.20
ST	4	20	4	1923	1.375x4...	1.25
		GRANT TRUCK				
TB	4	12-15	1½	1915-21	1.0937x3 7/16	.80
RT	4	14	1½	1918-21	1.0625x3¼	1.06
TH	4	16	2-2½	1916-21	1.2175x3⅛	1.00
TJ	4	18	3½-5	1917-21	1.4365x4⅛	1.20
		HAWKEYE TRUCK				
TL	4	K	1-1½	1923	1.0625x3¼	1.06
AU	4	K	1½	1916-21	1.000x3½	1.20
TA	4	M-ML	2-2½	1919-23	1.125x3 11/16.	1.06
SE	4	M	3½	1920-21	1.250x3⅞.	1.30
RC	4	N	3½	1923	1.250x3⅞.	1.30
		INDIANA TRUCK				
RJ	4	12-Highway Ex.	1-1½	1920-23	1.000x3½.	1.20
UT	4	38	2½	1920-23	1.000x3⅞.	.96
UU	4	40	3½	1920-23	1.000x4 3/32.	.96
RK	4	51 2 Bushing	5	1921-23	1.375x4 7/16.	1.25
WG	4	51 1 Bushing	5	1921-23	1.375x4 11/16.	1.25
		INTERNATIONAL TRUCK				
CA	4	Speed	1	1920-23	.875x3¼.	.80
UL	4	21-31-41	¾-1-1½	1915-19	.859x3 5/16.	1.00
UM	4	21-31-41	1-1½-2	1920-23	1.2985x3 5/16	1.30
UN	4	61-101	2½-3-5	1918-23	1.299x3 11/16.	1.30
		KELLY SPRINGFIELD TRUCK				
UA	4	K-31 to 38	1½-2½	1916-23	1.125x3 5/16.	1.45
UB	4	K-40 to 60	3½-4-5-6	1916-23	1.375x4...	1.75
		KISSELL TRUCK				
TY	4	All	¾-1-1½	All	1.125x3⅝.	1.20
RY	4	All	2-3½-4-5	All	1.125x4...	1.35
		KOEHLER TRUCK				
BM	4	D	1½	1920-23	.875x3¼.	.90
RP	4	M-MCS-F-MT Tractor	2½-3½	1921-23	1.125x3½.	1.10
		MACK TRUCK				
RW	4	AB	1½-2-2½	1916-23	1.312x3½.	1.35
RX	4	AC	3½-5-6½-7½	1916-23	1.4375x4½	1.50
RW	4	AB Tractor	5	All	1.312x3½.	1.35
RX	4	AC Tractor	7-10-13-15	All	1.4375x4½	1.50
		MASTER TRUCK				
TL	4	11	¾-1¼	1923	1.0625x3¼	1.06
TK	4	JW-JD-Z	1½-2	1919-20	1.0625x3 11/16	1.06
WB	4	All	1½-2	1921-23	1.0625x3½	1.10
TA	4	All	2½	1916-23	1.125x3 11/16.	1.06
RB	4	41	2½	1923	1.125x3 11/16.	1.50
RC	4	All	3½-4-5	1918-23	1.250x3⅞.	1.30
TM	4	B-BL-F-FL	5	1921-23	1.375x4 7/16.	1.50
TA	4	T Tractor		1921-23	1.125x3 11/16.	1.06
		MAXWELL TRUCK				
J	4	25	1-1½	1914-21	.750x3¼.	.58
FA	4	25	1-1½	1922-23	.750x3...	.58
		NASH TRUCK				
TC	4	2018-3018	1-1½-2	1918-23	.9375x3 3/32.	.90
TA	4	4017	2	1920-23	1.125x3 11/16.	1.06

Piston Pins—Continued

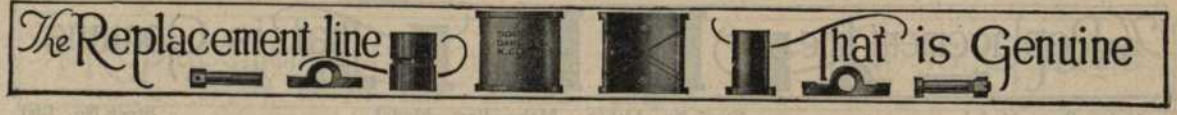
For Motor Trucks—Continued

Code No.	Cyl.	Model	Tonnage	Year	Size	Each
		O. K. TRUCK				
RD	4	H	1	1920-22	1.0625x3⅛	1.06
TL	4	H	1	1923	1.0625x3¼	1.06
WD	4		1½	1921-23	1.125x3 7/16	1.10
TX	4	L	2½	1920-23	1.125x3 1/16	1.06
RC	4	M	3½	1920-23	1.250x3⅞	1.30
		ONEIDA TRUCK				
TB	4	A-B	1-1½	1917-19	1.0937x3 7/16	.80
TN	4	A9	1½	1920-21	1.125x3⅜	1.20
RO	4	B-C	1¾-2-2¼-2½	1920-23	1.125x3⅜	1.20
TH	4	C	2	1917-19	1.2175x3 1/8	1.00
TJ	4	D	3½	1917-19	1.4365x4⅛	1.20
TP	4	D-E	3½-5	1921-23	1.249x4⅛	1.40
		PACKARD TRUCK				
SA	4	EC-EX-EB-D	1-1½-2	1917-23	1.125x3 1/16	1.35
SB	4	E-DE	3-4	1917-23	1.250x4 5/16	1.50
SD	4	EF-EY	5-6	1917-23	1.250x4 1/16	1.50
		PIERCE ARROW TRUCK				
EA	4	X2-3-4		1913-18 Spl.	1.0625x3¾	1.20
EG	4	5X	2	1919-24	1.0625x3½	1.20
ED	4	W2-R10	3½-5	1919-24	1.125x4...	1.30
TD	4	R1-R9	5	1911-18 Spl.	1.250x4⅝	1.75
		REO TRUCK				
AB	4	Speed Wagon	1-1½	1914-17	1.235x3⅝	1.20
RU	4	Speed	All	1918-23	1.225x3 5/16	1.00
		REPUBLIC TRUCK				
TW	4	9	¾	All	1.0625x2⅞	1.06
CA	4	Rapid Transit	¾	1923	.875x3¼	.80
TU	4	9 Spec.	¾-1-1¼	All	1.0625x3⅛	1.06
TB	4	10E-11X	1-1½	All	1.0937x3 7/16	.80
		SAMSON TRUCK				
H	4	25-25E-15-15E	¾-1½	All	.850x3 5/16	.58
		SANDOW TRUCK				
B	4	G	1	1918-21	1.0937x3¼	.72
TB	4	G-CG-I	1-1½-2	1918-23	1.0937x3 7/16	.80
TH	4	J	2½	1916-22	1.2175x3 1/8	1.00
TJ	4	M-L	3½-5	1916-23	1.4365x4⅛	1.20
TG	4		5	1923	1.375x4 7/16	1.20
		STERLING TRUCK				
UD	4		2½-3½	1918-20	1.250x3⅞	1.40
RM	4	2 Bushing	2½	1921-23	1.250x3¾	1.20
SR	4	1 Bushing	2½	1921-23	1.250x4 1/16	1.20
RL	4	2 Bushing	2½-2	1921-23	1.250x3⅜	1.20
SP	4	1 Bushing	1½-2	1921-23	1.250x3¾	1.20
RN	4	2 Bushing	3½	1921-23	1.375x3⅞	1.35
SS	4	1 Bushing	3½	1921-23	1.375x4...	1.35
RK	4	2 Bushing	5-7½	1921-23	1.375x4 7/16	1.25
WG	4	1 Bushing	5-7½	1921-23	1.375x4 1/16	1.25
		STEWART TRUCK				
TS	4	11	¾	1919-21	.750x2⅞	.76
BM	4	12	1	1920-21	.875x3¼	.90
RD	4	15	1-1¼	1921-23	1.0625x3⅛	1.06
TB	4	8-9	1-1½	1918-23	1.0937x3 7/16	.80
TL	4	15	1½	1923	1.0625x3¼	1.06
TH	4	7	2	1918-22	1.2175x3 1/8	1.00
TX	4	7X	2½	1920-23	1.125x3 1/16	1.06
TJ	4	10	3½	1918-22	1.4365x4⅛	1.20
RC	4	10X	3½	1920-23	1.250x3⅞	1.30
		TRANSPORT TRUCK				
AU	4	20	1	1919-21	1.000x3½	1.20
RT	4	25	1½	1922-23	1.0625x3¼	1.06
TL	4	26	1½	1923	1.0625x3¼	1.06
TB	4	15-35	1-2	1919-23	1.0937x3 7/16	.80
WE	4	36	2	1923	1.0625x3..	1.20
TH	4	55	3	1922-23	1.2175x3 1/8	1.00
TX	4	50-60	2½-3½	1920-23	1.125x3 1/16	1.06
RC	4	70-75	3½-5	1920-23	1.250x3⅞	1.30
		VELIE TRUCK				
TB	4	46	1½	1919-23	1.0937x3 7/16	.80
RP	4	52-53	1½-2½	1923	1.125x3½	1.10
TH	4		2	1916-20	1.2175x3 1/8	1.00
TJ	4		3½-4	1916-20	1.4365x4⅛	1.20
		VIM TRUCK				
RP	4	31-25	1-2	1918-22	1.125x3½	1.10
RS	4		3	1918-21	1.250x4 1/16	1.25
		WHITE TRUCK				
EO	4	GK	¾	All	1.047x3 7/16	1.00
TR	4	GE	2	All	1.109x4...	1.00
EO	4	20	2	1923	1.047x3 7/16	1.00
SX	4	GO	3½	All	1.190x3½	1.00
SY	4	GMB	5	All	1.375x3⅞	1.12
		WICHITA TRUCK				
RJ	4	K-L-M-R	1-1½-2-2½	1920-23	1.000x3½	1.20
RM	4	2 Bush. RX	3	1922-23	1.250x3¾	1.20
SR	4	1 Bush. RX	3	1921-23	1.250x4 1/16	1.20
RN	4	2 Bush. O-S	3½-4-5½	1921-23	1.375x3⅞	1.35
SS	4	1 Bush. O-S	3½-4-5½	1921-23	1.375x4...	1.35
		YELLOW CAB TRUCK				
TB	4	M-21	¾-1	1918-21	1.0937x3 7/16	.80
UG	4	M-22-42	¾-1¼	1922-23	1.0937x3⅜	.80

For Tractors

Code No.	Cyl.	Model	Horsepower	Year	Size	Each
		ALLIS CHALMERS TRACTOR				
TS	4		6-12	1921-23	.750x2⅞..	.76
		AULTMAN TAYLOR TRACTOR				
UE	4				1.500x4....	1.45
		CASE TRACTOR				
UF	4	15-27		1919-23	1.375x4 3/16..	1.75
TK	4				1.0625x3 1/16.	1.06
TA	4				1.125x3 1/16..	1.06
UP	4	15-25		1921-23	1.250x3¾..	1.50
		CLEVELAND EARLY TRACTOR				
RT	4				1.0625x3¼.	1.06
		DART TRACTOR				
SE	4	Blue J-TY	15-30	1920-21	1.250x3⅞..	1.30
TA	4	Blue J-TE	15-30	1920-22	1.125x3 1/16..	1.06
		EMERSON BRANTINGHAM				
TS	4	101	6-12		.750x2⅞..	.76
		ESSEX TRACTOR				
SS	4		15-30		1.375x4....	1.35
RJ	4	12-20		All	1.000x3½..	1.20
		FORDSON TRACTOR				
TF	4	All		All	1.375x3½..	1.00
		GRAY TRACTOR				
UE	4	18-36		1921	1.500x4....	1.45
		HEIDER TRACTOR				
TS	4	Cultivator	6-10		.750x2⅞..	.76
UD	4	D	9-16	1917-22	1.250x3⅞..	1.40
		INDIANA TRACTOR				
TS	4	F	5-10	1919-22	.750x2⅞..	.76
		INTERNATIONAL TRACTOR				
UN	4	8-16		1917-23	1.299x3 1/16..	1.30
		MOLINE TRACTOR				
AT	4				1.000x2 1/8..	.75
		NATIONAL TRACTOR				
UE	4	F		1919	1.500x4....	1.45
RM	4				1.250x3¾..	1.20
		PLANET, JR., TRACTOR				
TS	4	Cultivator	5-10		.750x2⅞..	.76
		PLOW MAN TRACTOR				
RC	4		15-30	1919-22	1.250x3⅞..	1.30
		ROCK ISLAND CULTIVATOR				
TS	4		5-10	1921-22	.750x2⅞..	.76
		SAMPSON TRACTOR				
UO	4	M		1920-21	1.125x3½..	1.20
		TWIN CITY TRACTOR				
UH	4	12-20			1.250x3⅞..	1.80
		TWO WAY TRACTOR				
RC	4	A		1920	1.250x3⅞..	1.30
RH	4		15-30	1920	1.1875x3 1/8.	1.40
		VICTORY TRACTOR				
TS	4	Cub	6-12		.750x2⅞..	.76
SR	4		15-30		1.250x4 1/16..	1.20
		VIM TRACTOR				
RJ	4		10-20	1920-22	1.000x3½.	1.20
		WALLIS TRACTOR				
UP	4		15-25	1921-23	1.250x3¾.	1.50
		WATERLOO BOY TRACTOR				
UY	4		12-25		1.250x6¼..	2.70

Replacement Bearings and Bushings



DOUGLAS-DAHLIN LINE

BEARINGS—BUSHINGS

BOLTS - NUTS - SHIMS - SCREWS

The Douglas-Dahlin line includes: 1—Connecting Rod Main and Camshaft Bearings (Die Cast and Bronze Back). 2—All-Phosphor Bronze Bushings for Piston Pins, Spring Eyes, Steering Knuckles and other miscellaneous uses. 3—Bolts and Nuts for Connecting Rods. 4—Brass Shims for Connecting Rod and Main Bearings. 5—Anchor Screws for Connecting Rod and Main Bearings. All materials are produced in accordance with the specifications of the Society of Automotive Engineers and are manufactured by the makers of a large percentage of original equipment materials. Bearings are packed one pair to the carton and the list prices shown are per pair. Upon purchases of 100 pair or more of an item, to be shipped in bulk, an extra discount of five per cent is allowed. Bushings are packed in cartons from 2 to 6 to the carton. List prices shown are per "each." Upon purchase of 100 or more of an item, to be shipped in bulk, an extra discount of ten per cent is allowed. Nuts and Bolts are packed in cartons from 4 to 12 to the carton, and list prices shown are "each." Upon purchase of 100 or more of an item, to be shipped in bulk, an extra discount of five per cent is allowed. A D-D shim consists of an assortment of thicknesses sufficient to shim one side of bearing. Shims are packed 8 to 16 to package and list prices shown are each. The suffix "B" on a Bearing stock number indicates Bronze Back, otherwise Die Cast. The symbol "✤" used in connection with the name of a car or engine indicates that parts are furnished by the Douglas-Dahlin Company for the car or engine which are not shown upon this list. Ask for complete Douglas-Dahlin Catalog and Directory.

Make—Part—Model	Stock No.	List
Abbott✤ 44, 1916-18	Cont. 7W	
Acason Truck✤ H, 2 Ton, 1919	Buda HU	
Ace✤ L-4, 1920-22	Hershell-Spillman 7000	
Ace✤ C-6, 1922	Cont. 6T	
American✤ B, 1917-20	Rutenber 25	
Anderson✤ 6, 1916-19	Cont. 9N	
Armleader✤ Truck, KW, 1916-19	Buda YU	
Auburn✤ 6-51, 1919-22	Cont. 7R	
Buda Engines✤—		
Brg. Con. Rod-BU, QU, TU, OU, OM3, TM3	6115B	$2.40
Brg. Con. Rod-RU, RV, RW, W, WU, R	6140B	2.32
Brg. Con. Rod-HU, IU, ITU, HTU	6195B	3.00
Brg. Con. Rod-YU, XTU, YTU	6200B	3.28
Brg. Con. Rod-DTU, CTU	6685B	2.64
Brg. Con. Rod-BTU, ATU	6690B	4.00
Brg. Front M.-BU, QU, TU, OU, OM3, TM3	6116B	3.92
Brg. Front M.-RU, RV, RW, W, WU, R	6141B	3.76
Brg. Front M.-HU, IU, ITU, HTU	6196B	4.28
Brg. Front M.-YU, XTU, YTU	6201B	4.52
Brg. Center M.-BU, QU, TU, OU, OM3, TM3	6117B	3.84
Brg. Center M.-R, RU, RV, RW, W, WU	6142B	3.88
Brg. Center M.-HU, IU, ITU, HTU	6197B	4.36
Brg. Center M.-YU, YTU, XTU	6202B	4.80
Brg. Rear M.-BU, QU, TU, OU, OM3, TM3	6118B	4.76
Brg. Rear M.-RU, RV, RW, W, WU	6143B	4.20
Brg. Rear M.-HU, IU, ITU	6198B	5.08
Brg. Rear M.-YU, XTU	6203B	5.32
Bush. Piston Pin-BU, QU, TU, OU, OM3, TM3	6119	.57
Bush. Piston Pin-LSU, RU, RV, RW, W, WU, R	6144X	.52
Bush. Piston Pin-HU, IU, ITU, HTU	6199X	.60
Bush. Piston Pin-YU, XTU, YTU	6204X	.72
Bolt Con. Rod-BU, QU, TU, OU, OM3, TM3, HU, IU, ITU, HTU	6115E	.28
Bolt Con. Rod-YU, XTU, YTU	6200E	.30
Nut Con. Rod Bolt-Same Models as 6115E & 6200E	6005N	.03
Screws, Con. Rod & M. Brg-All Models	11	.80
Shims-Brass-Con. Rod-BU, QU, TU, OU, OM3, TM3	6115S	.24
Shims-Brass-Con. Rod-R, RU, RV, RW, W, WU	6140S	.20
Shims-Brass-Con. Rod-HU, IU, ITU, HTU	6195S	.24
Buick✤—		
Brg. Con. Rod-6E, H & K, 1918-20	6710	1.30
Brg. Con. Rod-6-44 to 50, 1921-23	6820	1.28
Brg. Con. Rod-4-B24, 25; C25, 1914-15	6470	1.36
Brg. Con. Rod-6-B, C & D; 4-B & C, 1914-15	6285	1.20
Brg. Con. Rod-6-D, Late 1917	6300	1.20
Brg. Con. Rod-6-D, 1916 & Early 1917	6290	1.00
Brg. Front M.-6- H & K, 1919-20	6711	2.08
Brg. Front M.-6-44 to 50, 1921-23	6821	2.16
Brg. Front C. M.-Same	6822	1.92
Brg. Front C. M.-6-H & K, 1919-20	6712	2.00
Brg. Rear C. M.-Same	6713	2.48
Brg. Rear C. M.-6-44 to 50, 1921-23	6823	2.84
Brg. Rear M.-Same	6824	2.72
Brg. Rear M.-6-H & K, 1919-20	6714	2.40
Bolt Con. Rod-6-E, H, K, 44 to 50, 1918-23	6710E	.12
Nut Con. Rod Bolt-Same	6125N	.02
Bush. Piston Pin-4-B24, 25, C25, 1914-15	6474	.44
Bush. Piston Pin-6-B, C, D, 1914-16; 4-B & C, 1914-16	6289	.34
Bush. Piston Pin-6-D45 to 49, 1916 & Early 1917	6294X	.20
Bush. Piston Pin-6-E, H & K, 1918-20	6714X	.26
Bush. Piston Pin-6-45 to 49, Late 1917	6304X	.17
Bush. Front Spr.-4-E34, 35, 37, 1918	J2S	.20
Bush. Front Spr.-6-D & E, H & K, 44 to 50, 1918-23	H2V	.22
Bush. Rear Spr.-4-D & E, 1916-18	H2V	.22
Bush. Rear Spr. Front Eye-6-D & E, 1916-18	J2W	.26
Bush. Rear Spr. Rear Eye-Same	K3W	.36
Bush. Spr.-Part No. 30309	H2S	.18
Bush. Spr.-Part No. 39236	P7W	.44
Bush. Spr.-Part No. 44115	P7TD	.36
Bush. Spr. Shackle-Part No. 33602	N6WS	.48
Bush. Spr. Shackle-Part No. 22832	M6TD	.34
Bush. Spr. Shackle-Part No. 44142	P7U	.36
Bush. Fan Shaft-Part No. 15129	K3M	.16
Bush. King Bolt-Part No. 6730	Q9PD	.24
Bush. Pinion Shaft-Part No. 15129	L5RD	.24
Bush. Rocker Arm-Part No. 15729	E.8F	.12
Bush. Rocker Arm-Part No. 36234	E.8G	.1[illegible]

Bush. Rocker Arm-Part No. 30472	H3J	.12
Bush. Rocker Arm-Part No. 37833	M7L	.16
Bush. Steering Knuckle-Part No. 65410	K3R	.20
Bush. Steering Knuckle-Part No. 61142	K3S	.27
Bush. Steering Knuckle-Part No. 65585	L4M	.19
Bush. Steering Knuckle-Part No. 60032	M5T	.34
Bush. Water Pump-Part No. 39369	H2S	.18
Shims-Brass-Con. Rod-6-E, H & K, 44 to 49, 1918-23	6710S	.16
Cadillac✤—		
Brg. Con. Rod-8-51 & 53, 1915-16	6440B	4.60
Brg. Con. Rod-8-55-57, 1917-19	6430B	3.56
Brg. Con. Rod-8-59-61, 1920-23	6435B	3.56
Bolt Con. Rod-8-51 & 53, 1915-16	6440E	.30
Bolt Con. Rod-Inside-8-55 & 57, 1917-19	6430E	.22
Bolt Con. Rod-Outside-8-55 & 57, 1917-19	6430EA	.20
Bush. Piston Pin-8-51 & 53, 1915-16	6444	.40
Bush. Piston Pin-8-55, 57, 59, 61, 1917-23	6434	.36
Bush. Front Spr.-8-59, 61, 1920-23	M5U	.34
Bush. Rear Side Spr.-Same	M5U	.34
Bush. Rear Cross Spr.-Same	M5U	.34
Bush. Spr.-Part No. A5122	P7U	.36
Bush. Spr.-Part No. A5121	J3U	.24
Nut Con. Rod Bolt-Inside-8-55 & 57, 1917-19	6130N	.06
Nut Con. Rod Bolt-Outside-Same	6430N	.06
Nut Con. Rod Bolt-8-51 & 53, 1915-16	6130N	.06
Case 6, U & V, 1918-22	Cont. 9N	
Chalmers✤—		
Brg. Front M.-Late-35B, 35C, 35D, 1918-23	6676B	2.78
Brg. Front M.-35A & Early 35B, 35C, 35D, 1916-19	7216B	3.00
Brg. Center M.-Same	7217B	3.56
Brg. Center M.-Late 35B, 35C, 35D, 1918-23	6677B	3.72
Brg. Rear M.-Same	6678B	3.68
Brg. Rear M.-35A & Early 35B, 35C, 35D, 1916-19	7218B	4.08
Bush. Piston Pin-35A, 35B, 35C, 35D, 1916-23	6679	.35
Bush. Piston Pin-6-26, 26B, 26C, Light Six, 1914-16	6749	.48
Bush. Piston Pin-6-32A & 32B, 1915-16	6754	.36
Bush. Front Spr. Front Eye-35A, B, C & D, 1916-23; 6, 1914-16	F1S	.17
Bush. Front Spr. Rear Eye-Same	G2U	.22
Bush. Rear Spr. Front Eye-Same	M5U	.34
Bush. Rear Spr. Rear Eye-Same	G2U	.22
Bush. Front Spr. Rear Hanger-Same	F1S	.17
Chandler✤—		
Brg. Con. Rod-6, 1917-23	6220	1.16
Brg. Con. Rod-6, 1914-17	6255	1.32

Replacement Bearings and Bushings—Continued

Make—Part—Model	Stock No.	List
Bolt Con. Rod-6, 1914-23	6220E	.18
Nut Con. Rod Bolt-6, 1914-23	6125N	.02
Bush. Piston Pin-6, 1917-23	6224	.42
Bush. Piston Pin-6, 1914-17	6259	.40
Bush. Front & Rear Spr.-6, 1917-23	K3U	.30
Chevrolet ✠—		
Brg. Con. Rod-4-H, F, FA, FB, C, 1913-23	6110B	1.68
Brg. Con. Rod-4-490, 1916-23	6125	.50
Brg. Front M.-4-490, 1916-23	6126	.84
Brg. Front M.-4-H, F, FA, 1914-18	6111	1.88
Brg. Front M.-4-FB, 1919-23	7076	1.84
Brg. Center M.-4-H, F, FA, FB, 1914-23	6112B	2.36
Brg. Center M.-4-490	6127B	1.76
Brg. Rear M.-4-H, F, FA, 1914-18	6113	2.40
Brg. Rear M.-4-FB, 1919-23	7078	2.72
Brg. Rear M.-4-490, 1916-23	6128	1.04
Bolt Con. Rod-4-490	6125E	.10
Nut Con. Rod Bolt-4-490	6125N	.02
Bush. Valve Rocker Arm-490, H, F, FA, FB	6129	.08
Bush. Water Pump-FA, FB, 490	6129X	.24
Bush. Camshaft Thrust-FA, FB	6129M	.52
Bush. Camshaft Thrust-490	6129G	.28
Bush. Plain Arm-490	G2M	.10
Bush. Steering Knuckle-No. 183-490	6128D	.18
Bush. Steering Knuckle-No. 41030-490	G1P	.12
Bush. Water Pump Packing Nut-490, FA, FB	6129K	.24
Bush. Transmission Gear Drive-H, F, FA, FB	6128G	.20
Bush. Transmission Gear Drive-490, G	L5TD	.24
Bush. Idler Gear-490, G	M5PD	.18
Bush. Countershaft-490, G	N7R	.24
Shims-Brass-Con. Rod-490, G	6125S	12
Shims-Brass-Con. Rod-C, H, F, FA, FB	6110S	10
Shims-Brass-Front M.-490, G	6126S	12
Shims-Brass-Center M.-490, G	6127S	12
Shims-Brass-Rear M.-490, G	6128S	.12
Cole ✠ 8, 860-40, 870, 890, 1917-23—Northway 309 Engine		
Cole ✠ 8, 850, 860-30, 1915-16—Northway 308 Engine		
Continental Engine ✠—		
Brg. Con. Rod-C2	6145B	2.84
Brg. Con. Rod-C4	6280B	2.48
Brg. Con. Rod-N, N¾, 8N	6120B	1.88
Brg. Con. Rod-E4, E7	6235	1.12
Brg. Con. Rod-7N, 7D	6240B	2.00
Brg. Con. Rod-9N	6250B	2.00
Brg. Con. Rod-7R, 6S	6270B	1.80
Brg. Con. Rod-6A, 6AG, 6H, 7H	6155	1.20
Brg. Con. Rod-O, OG	6065	1.12
Brg. Con. Rod-B2	6070B	5.40
Brg. Con. Rod-7W, 7K	6100	.88
Brg. Con. Rod-C	6930B	2.64
Brg. Con. Rod-J4	6535B	3.32
Brg. Con. Rod-B5	6670B	5.32
Brg. Con. Rod-L4	6705B	4.04
Brg. Con. Rod-8A, 6K	6740B	2.36
Brg. Con. Rod-K4	6880B	3.40
Brg. Front M.-N, N¾, 8N, 6A, 6AG, 6H	6121B	3.48
Brg. Front M.-E4, E7	6176B	3.60
Brg. Front M.-6N, 8H, 7N, 7D	6241B	4.00
Brg. Front M.-9N	6251B	3.72
Brg. Front M.-7R, 6S	6271B	4.52
Brg. Front M.-B2	6070B	5.40
Brg. Front M.-7W, 7K	6101B	3.68
Brg. Center M.-N, N¾, 8N, 6A, 6AG, 6H	6122B	3.76
Brg. Center M.-E4, E7	6177B	5.12
Brg. Center M.-6N, 8H, 7N, 7D	6242B	4.00
Brg. Center M.-9N	6252B	3.24
Brg. Center M.-7R	6272B	2.56
Brg. Center M.-B2	6071B	6.72
Brg. Center M.-7W, 7K	6102B	3.52
Brg. Rear M.-N, N¾, 8N, 6A, 6AG, 6H	6123B	3.68
Brg. Rear M.-E4, E7	6178B	4.96
Brg. Rear M.-6N, 8H, 7N, 7D	6243B	4.12
Brg. Rear M.-9N	6253B	4.12
Brg. Rear M.-7R	6273B	4.16
Brg. Rear M.-B2	6071B	6.72
Brg. Rear M.-7W, 7K	6103B	3.68
Bush. Piston Pin-C2, C4	6284	.60
Bush. Piston Pin-N, N¾, 8N, 6N, 8H, 7N, 7D	6124	.45
Bush. Piston Pin-E4, E7	6179	.92
Bush. Piston Pin-9N	6254	.43
Bush. Piston Pin-7R, 6S	6274	.34
Bush. Piston Pin-B2	6074	.78
Bush. Piston Pin-7W, 7K	6104	.36
Bush. Piston Pin-J4	6539	.60
Bush. Piston Pin-L4	6709	.76
Bush. Piston Pin-8A, 67	6744	.56
Bolt Con. Rod-C2	6145E	.26
Bolt Con. Rod-E4, E7, C4	6175E	.18
Bolt Con. Rod-9N	6250E	.30
Bolt Con. Rod-7R, 6S	6270E	.26
Bolt Con. Rod-B2	6070E	.30
Bolt Con. Rod-7W, 7K	6100E	.16
Bolt Con. Rod-8A, 6T	6740E	.24
Nut Con. Rod Bolt-C2	6145N	.10
Nut Con. Rod Bolt-C4, E4, E7	6175N	.08
Nut Con. Rod Bolt-7R, 6S	6270N	.06
Nut Con. Rod Bolt-B2	6070N	.03
Nut Con. Rod Bolt-8A, 6T	6740N	.08
Screws-Con. Rod-C2, C4, E4, E7, 9N, 7W, 7K	10	.80
Screws-Con. Rod-7R, 6S	13	.80
Screws-Con. Rod-B2	32	2.90
Shims-Brass-Con. Rod-N, N¾, 8N	6120S	.16
Shims-Brass-Con. Rod-7N, 7D	6240S	.20
Shims-Brass-Con. Rod-9N	6250S	.10
Shims-Brass-Con. Rod-7R, 6S	6270S	.20
Shims-Brass-Con. Rod-7W, 7K	6100S	.10
Shims-Brass-Con. Rod-E4, E7	6175S	.20
Dodge—		
Brg. Con. Rod-Up to 1918	6350B	1.25
Brg. Con. Rod-1918-24	6345B	1.20
Brg. Front M.-Up to 1918	6351B	1.56
Brg. Front M.-1918-23	6346B	1.55
Brg. Center M.-Up to 1918	6352B	1.56
Brg. Center M.-1918-23	6347B	1.55
Brg. Rear M.-Up to 1918	6353B	1.56
Brg. Rear M.-1918-23	6348B	1.58
Brg. Rear Trans.-Up to 1918	6354B	1.88
Bolt Con. Rod-All Models	6345E	.16
Nut Con. Rod Bolt-All Models	6070N	.03
Bush. Piston Pin-All Models	6349	.26
Bush. Countershaft, Low & Reverse Gear	6349D	.21
Bush. Front Spr., Rear Bracket	G1S	.18
Bush. Front Spr.	F1S	.17
Bush. Rear Spr. Rear Eye	F1U	.17
Bush. Rear Spr. Front Eye	H3U	.20
Bush. Reverse Idler Gear	N6QK	.20
Bush. Steering Knuckle-No. 9789	M5R-2	.20

Bush. Steering Knuckle-No. 167	K3R-2	.22
Bush. Tie Rod-No. 7677	H1.3QK	.12
Bush. Tie Rod-No. E178 & 198	G1M	.12
Shims-Brass-Con. Rod	6345S	.10
Shims-Brass-Front M.	6346S	12
Shims-Brass-Center M.	6347S	.12
Shims-Brass-Rear M.	6348S	.12
Dort ✠ 4, 1917-22—Lycoming K Engine		
Elcar ✠ 6, D, H, G, 1919-22—Cont. 7R		
Elcar ✠ 4, 1917-22—Lycoming K		
Elcar ✠ 6, G, H, E, 1918-19—Cont. 7N		
Elgin ✠ H & K 40, 1919-22—Falls XE		
Elgin ✠ F & G, 1916-18—Falls K		
Essex A, 1918-23—		
Brg. Con. Rod	6315B	1.64
Brg. Front M.	6316B	2.68
Brg. Center M.	6317B	3.48
Brg. Rear M.	6318B	3.20
Bush. Piston Pin	6319	.26
Bush. Piston Pin	6319X	.30
Bush. Front Spr. Front Eye	K3TD	.29
Bush. Rear Spr. Front Eye	M5TD	.34
Bush. Rear Spr. Rear Eye	K3TD	.29
Shims-Brass-Con. Rod	6315S	.16
Falls Engine, G15, K, N, L, XE, 900, XM, M, P, R, RI, 8—		
Brg. Con. Rod	6160	1.08
Ford—		
Bolt Con. Rod	6095E	.08
Bronze Differential Thrust Washer	6099D	.34
Bush. Piston Pin	6099	.14
Bush. Front Spr.	G2TF-4	.19
Bush. Rear Spr.	H2U-4	.20
Bush. Transmission Reverse Gear	6099K	.48
Bush. Transmission Gear Sleeve	6099H	.42
Bush. Transmission Drive Gear	6099G	.16
Bush. Spindle Body	6099J	.10
Bush. Transmission Slow Speed Gear	6099L	.30
Bush. Transmission Triple Gear Flange	6099M	.27
Nut Con. Rod Bolt	6095N	.03
Shims-Brass-Con. Rod	6095S	.06
Shims-Brass-Front & Center M.	6096S	.08
Shims-Brass-Rear M.	6098S	10
Gardner ✠, All Models, 1920-23—Lycoming K		
Grant ✠ 6H, HY, HZ, 1919-20—Falls XE		
Grant ✠ 6, K, V, 9-9X, 1916-19—Falls K		
G. B. S. Engine ✠, EM, PMM, PMA, PMS, SM, SA, PMG, SG, PM—		
Brg. Con. Rod	6190	1.29

Replacement Bearings and Bushings—Continued

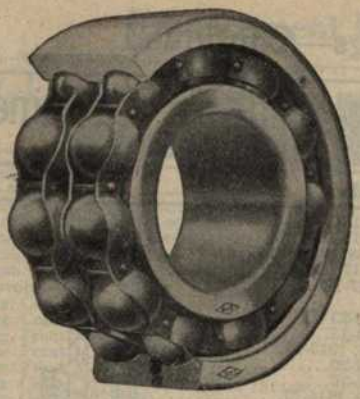
Make—Part—Model	Stock No.	List
Haynes ✣—		
Brg. Con. Rod-6-45, 47, 50, 55, 1919-22	6045	1.48
Brg. Con. Rod-Same	6045B	2.52
Herschell-Spillman Engine ✣, 4-7000, 6-11000—		
Brg. Con. Rod	6035	2.04
Hudson ✣ 6-54, 1913-14	Cont. 6A	
Hudson ✣ 6-40, 1915-16	Cont. 7N	
Brg. Con. Rod-Super Six, 1916-22	6320B	1.84
Brg. Front M.-Same	6321B	2.84
Brg. Center M.-Same	6322B	2.44
Brg. Rear Center M.-Same	6323B	3.24
Brg. Rear M.-Same	6324B	3 72
Bolt Con. Rod-Same	6320E	.16
Bush. Piston Pin-Same	6324X	.36
Bush. Front Spr. Front Eye-Same	L4UN	.36
Bush. Front Spr. Rear Eye-Same	L4UN-4	.39
Bush. Rear Spr. Rear Eye-Same	L4UN	.36
Bush. Rear Spr. Front Eye-Same	M5UN	.36
Nut Con. Rod Bolt-Same	6105N	.03
Shims-Brass-Con. Rod-Same	6320S	.14
Screws-Con. Rod-Same	14	.80
Screws-M. Brg.-Same	41	1.80
Hupmobile ✣—		
Brg. Con. Rod-R, 1918-23	6335B	1.40
Brg. Con. Rod-N, 1917	6340B	1.84
Bolt Con. Rod-R, 1918-23	6335E	.24
Bolt Con. Rod-N, 1917	6340E	.20
Nut Con Rod Bolt-R, 1918-23	6005N	.03
Nut Con. Rod Bolt-N, 1917	6340N	.06
Shims-Brass-Con. Rod-R, 1918-23	6335S	.20
Shims-Brass-Con. Rod-N, 1917	6340S	.24
Le Roi Engine 2C ✣—		
Brg. Con. Rod	6180	1.48
Lycoming Engine ✣—		
Brg. Con. Rod-K, KA, KB, KM	6295	1.24
Bolt Con. Rod-Same	6295E	.16
Nut Con. Rod Bolt-Same	6005N	.03
Bush. Piston Pin-K, KA, KB, KM, DU, L	6299	.28
Shims-Brass-Con. Rod-K, KA, KB, KM	6295S	.20
Maxwell ✣ 25, 1914-22—		
Brg. Con. Rod	6520	1.36
Brg. Front M.	6521B	2.14
Brg. Rear M.	6522B	3.76
Brg. Rear Transmission (Solid Round)	6523R	2.88
Bolt Con. Rod	6520E	.14
Bush. Piston Pin	6524	.24
Bush. Rear Spr.	L5U	.30
Bush. Rear Lower Spr.	J3S	.24
Nut Con. Rod Bolt	6125N	.02
Shims-Brass-Con. Rod	6520S	.12
Mitchell ✣ 6, 1917-22—		
Brg. Con. Rod	6595	1.24
Nash ✣ 681-687-1918-23—		
Brg. Con. Rod	6165	1.48
Northway Engine ✣—		
Brg. Con. Rod-309	6230B	4.76
Brg. Con. Rod-208, 209	6225B	4.00
Brg. Con. Rod-110, 111	6515	1.16
Brg. Con. Rod-107, 108, 109	6260	1.00
Bolt Con. Rod-Same	6260E	.10
Bolt Con. Rod-110, 111	6515E	.10
Nut Con. Rod Bolt-Same	6515	.05
Nut Con. Rod Bolt-107, 108, 109	6125	.02
Bush. Piston Pin-309	6234	.36
Bush. Piston Pin-208, 209	6389	.22
Bush. Piston Pin-107, 108, 109	6264	.28
Shims-Brass-Con. Rod-107, 108, 109, 110, 111	6260S	.20
Oakland ✣ 6-32, 32B, 34, 1916-17	Northway 107-109	
Oakland ✣ 6-34B, 34C, 34D, 1918-22	Northway 110-111	
Oakland ✣ 8-50 & 60, 1916-17	Northway 208-9	
Oldsmobile ✣ 6-37, 1916-18	Northway 107-8-9	
Oldsmobile ✣ 6-37A, 1919-22	Northway 110-111	
Oldsmobile ✣ 8-44, 44B, 45, 45A, 1916-21	Northway 208-209	
Oldsmobile ✣ 4-43A Truck	Chevrolet FB	
Overland ✣—		
Brg. Con. Rod-4-83, 83B, 84, 85, 88, 1916-17; 45, 46, 47, 1911; 37, 38, 49, 58, 1910-12; 50, 51, 59, 69, 81, 1912-15; 60, 79, 80, 1912-15	6205	1.20
Brg. Con. Rod-4-75 & 75B, After First 25,000 Cars 1916; 90 & 90B, 1917-19	6210	1.30
Brg. Con. Rod-4-M, 1919-23	6215	.54
Brg. Front M.-Same	6216	1.40
Brg. Rear M.-Same	6217	1.92
Bush. Piston Pin-4-50, 51, 59, 60, 69, 79, 80, 81, 1912-15; 83, 83B, 84, 85, 88, 1916-17	6209	.40
Bush. Piston Pin-4-75, 75B, 90, 90B, 1916-19	6214	.38
Bolt Con. Rod-4-M, 1919-23	6215E	.10
Nut Con. Rod Bolt-Same	6125N	.02
Shims-Brass-Con. Rod-M4, 1919-23	6215S	.10

Make—Part—Model	Stock No.	List
Overland 6-82, 1915-16	Cont. 6H	
Overland 6-86, 1915-16	Cont. 7H	
Overland 6-86B, 88, 89, 1916-17	Cont. 6A	
Overland 6-89, 1917-18	Cont. 8H	
Overland 6-85, 1917-18	Cont. 7W	
Paige ✣ 6-66, 1920-23 (C)	Cont. 8A	
Paige ✣ 6-46, 1914-15	Cont. 6H	
Paige ✣ 6-46, 6-51, 1915-16	Cont. 7N	
Paige ✣ 6-55, 1917-20	Cont. 9N	
Paige ✣ 6-36, 1915-16	Rutenber 22	
Paige ✣ 6-38, 6-39, 1916-19	Rutenber 25	
Brg. Con. Rod-6-42, 6-44, 1919-22	6500	1.52
Bush. Piston Pin-Same	6504	.48
Reo ✣ T6, U6, 1920-23—		
Bush. Piston Pin	6984	.28
Studebaker ✣—		
Brg. Con. Rod-EG, Big 6, 1919-23; 6ED, 1916-18; SF4, 1916-18; SH4, 1919; EH, Special Six, 1920-23	6510	1.36
Brg. Con. Rod-EJ, Light 6, 1920-23	6920	1.36
Brg. Front M.-SH4, 1919; EH, Special Six, 1919; EG, Big Six, 1919	6511B	2.76
Brg. Front M.-EG, Big Six, EH, Special Six, 1920-23	6791B	3.28
Brg. Front M.-SF4, 1916-18; ED6, 1918	7201B	2.60

Brg. Front M.-EJ, Light Six, 1920-23	6921B	3.36
Brg. Center M.-SF4, 1916-18; SH4, 1919	6513B	2.80
Brg. Center M.-EH, Special Six, 1919	6512B	2.40
Brg. Center M.-EG, Big Six, 1920-23	6792B	3.00
Brg. Center M.-EJ, Light Six, 1920-23	6922B	2.84
Brg. Rear Center M.-EG, Big Six, 1919; 6ED, 1916-18; EH, Special Six, 1919	6513B	2.80
Brg. Rear Center M.-EJ, Light Six, 1920-23	6923B	2.96
Brg. Rear Center M.-EG, Big Six, 1920-23; EH, Special Six, 1920-23	6793B	3.44
Brg. Rear M.-SH4, 1919; EH, Special Six, 1919; EG, Big Six, 1919	6514B	3.44
Brg. Rear M.-ED, 1916-18; SF4, 1916-18	7204B	4.16
Brg. Rear M.-EH, Special Six, 1920-23	6794B	3.88
Brg. Rear M.-EJ, Light Six, 1920-23	6924B	3.56
Bolt Con. Rod-EG, Big Six; EH, Special Six, 1919-23	6510E	.14
Bolt Con. Rod Cap-EG, Big Six, 1919-23	6510E	.14
Bolt Con. Rod-EJ, Light Six, 1920-23	6920E	.14
Bush. Piston Pin-6EB, 25SA, DD, 1913-16	6814	.34
Bush. Piston Pin-SH4, 1919; EG, Big Six, 1920-23; EH, Special Six, 1920-23	6514R	26
Bush. Piston Pin-EG, Big Six, 6ED, 1916-18; SF4, 1916-18	6819X	.42
Bush. Front Spr.-EG & EH, 1916-23	H2U	.20
Bush. Rear Spr. Hanger-Same	H2U	.20
Nut Con. Rod Bolt-EH, Special Six; EG, Big Six, 1919-23	6005N	.03
Nut Con. Rod Bolt-EJ, Light Six, 1920-23	6515N	.05
Nut Con. Rod Cap Bolt-EG, Big Six, 1919-23	6125N	.02
Shims-Brass-Con. Rod-EG, Big Six, 1919-20	6510S	.20
Shims-Brass-Con. Rod-EG, Big Six; EH, Special Six; SH4, 1919	6510SA	.12
Traffic Truck ✣, C-746, 2 Ton, 1918-21	Cont. N¾	
U. S. Truck ✣, S, J, D, 3½ Ton, 1915-21	Cont. E4	
Velie ✣ 6-48, 1919-22	Cont. 7R	
Velie ✣ 6-34, 1920-22	Falls 9000	
Waukesha Engine ✣—		
Brg. Con. Rod-B, BX, BUX, BU4	6400B	3.00
Brg. Con. Rod-L. LU4, LU7; M, MU4, MU7; P, PU4, PU7	6395B	4.28
White Truck ✣—		
Brg. Con. Rod-15, ¾ Ton; 1, 1½, 2 & 2½ Ton, 1918-20	6130B	2.84
Wisconsin Engine ✣—		
Brg. Con. Rod-A, AU, JU, JAU	6005B	4.08

We can also furnish many items which are not shown in this list. Give us the part number, where used and make, model and year of car.

Timken and New Departure Bearings



We are in position to furnish practically all numbers of Timken Roller Bearings and New Departure Ball Bearings for prompt shipment from Kansas City stock. Orders should specify make, model and year of car for which the bearings are intended, also where they are to be used.

Shafer Roller Bearings for Ford

Reduces car upkeep by eliminating friction—preserves front axle spindle from destructive wear caused by present Ball Assemblies—prevents rattling and wobbling and makes steering easier.

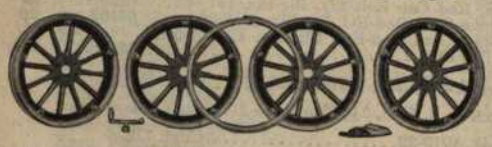
This Bearing is distinctly different from any used for similar purposes. Accepts thrust pressure equally as well as radial loads and being self-aligning, meets spindle deflection without binding of the Rollers.

The Rollers being concave, form a perfect cradle for the inner cone with its convex surface and allow the cone to "swing" to meet any distortion of spindle when same gets out of alignment.

Can be furnished for all cars using cup and cone type and other ball bearings in front wheels, also many other bearings. Very popular for replacing Ford front wheel ball bearings.

Shafer Roller Bearings for Ford. Per set for 2 wheels, **$9.00**

Replacement Wheels for Dodge



Made of seasoned Hickory, assembled and finished by skilled workmen.

Complete set consists of:

Two front and two rear wood felloe wheels bored for Dodge hubs, but without hubs, with necessary bolts, clamps, 12 hub bolts and one rim wrench.

Five 32x3½ S. S. Demountable Rims, or five 32x4 S. S. Demountable Rims.

Finished in black, ready for use.

Securely packed 1 set to a crate. Weight per crate 167 lbs.

32x3½ Wheels and Rims.....Per set, **$60.50**

32x4 Wheels and Rims.....Per set, **$65.50**

Discwood Wheels

Furnished for both Regular and Balloon Tires.

"Dayton Discwood" Wheels are thin wood sheets cemented together with waterproof glue under high pressure. The grain of each lamination runs in opposite directions, which gives the greatest possible strength.

Guaranteed not to separate or warp.

They are extremely light and twice as strong as spoke wheels of same weight. The distribution of the weight throughout the entire wheel helps the "get away" and saves gasoline and tires.

They do not rumble, rust or fatigue (crystalize), destroy bearings or accentuate axle or gear noises.

They do not conduct heat from brake to tires.

Road shocks, following the grain in the lamination, disseminate through whole wheel, relieving the axle.

When strained they snap back to normal position without permanent set.

There are no spokes to work loose or break, this obviating collapse, rattle or squeak.

Manufactured and covered with Bocelium compound which waterproofs the wood and holds the paint.

When ordering specify Make of Car, Year, Model, Size Rim (Tire). Also whether Regular or Balloon Type is wanted. Give rim equipment on present car—Jaxon, Firestone, Stanweld, Kelsey, Hayes or Cleveland. State whether new rims are wanted and Size and make. Also specify color of paint—Black, Blue, Red, Gray or Ivory.

These Wheels are guaranteed against warpage or separation, and factory will replace any Wheel broken under any condition, if returned to factory for replacement.

Common Clincher Rims can be supplied on 30x3½ size and Q. D. Rims on other sizes at same price if demountable rim equipment is not desired.

The following prices include the correct felloe band applying on the wheels to fit the top rims, but does not include the top rims. This also includes the Wedge Clamps, Rim Bolts and Nuts. The prices include a first-class job of painting in any of the following standard colors: Black with red stripe, dark blue with light blue stripe, red with black stripe, gray with red stripe, ivory with black stripe. An allowance of $6.00 per set from list price is made if wheels are desired unpainted.

Rim Size	Takes Oversize Tires	Per Set of Four Wheels
30x3½	31x4	43.00
32x3½	33x4	65.00
32x4	33x4½	65.00
33x4	34x4½	65.00
34x4		65.00
32x4½	33x5	80.00
34x4½	35x5	80.00
20	Balloon 29-4.40	43.00
21	Balloon 28-3½	43.00

Other sizes furnished on special order.

Plain Clincher Wheels for Ford

Made of seasoned Hickory, assembled and finished by skilled workmen.

Front wheels, 30x3 Plain Clincher Rims.

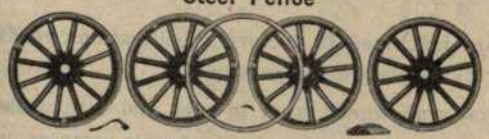
Rear wheels, 30x3½ Plain Clincher Rims.

All wheels bored for Ford hub and hub bolts. Finished in black and ready for use. Packed 5 wheels of either size to the crate. Weight per crate 88 lbs.

30x3 Wheels.....Each, $5.30
30x3½ Wheels.....Each, $5.30

Clincher Demountable Rim Sets for Ford

Steel Felloe



Made of seasoned Hickory, assembled and finished by skilled workmen.

Special-shaped steel felloe is constructed so that the Tire Rim has complete bearing against rear flange and rests on top wall of front flange, which acts as an auxiliary bearing, so arranged that it will take any standardized rim. Strength and durability guaranteed superior to any other steel felloe wheel on the market.

Complete set consists of: Four wheels with rim bolts and clamps, bored for hub and hub bolts, but without hub, five 30x3½ Plain Clincher Demountable Rims, 24 hub bolts and rim wrench.

Finished in natural wood or black finish.

Packed 1 complete set to a crate. Weight per crate 211 lbs.

Natural wood finish.....Per set, $38.00
Black finish.....Per set, $38.00

Clincher Demountable Rim Sets for Ford

Wood Felloe

Made of seasoned Hickory, assembled and finished by skilled workmen.

Complete set consists of:

Four wheels with felloe bands, rim bolts, clamps, hub bolts and rim wrench. Bored for hub and hub bolts but without hubs. Five 30x3½ Plain Clincher Jaxon Demountable Rims.

Finished in either natural wood or black finish. Packed complete set in crate. Weight per crate 146 lbs.

Natural wood finish.....Per set, $42.00
Black finish.....Per set, $42.00

S. S. Demountable Rim Sets for Ford

Wood Felloe

Made of seasoned Hickory, assembled and finished by skilled workmen.

Complete set consists of:

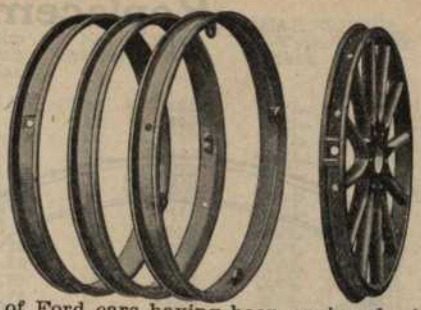
Four wheels with felloe bands, rim bolts, clamps, hub bolts and rim wrench. Bored for hub and hub bolts, but without hubs. Five 30x3½ Straight Side Jaxon Demountable Rims.

Finished in either natural wood or black finish.

Packed one complete set in crate. Weight per crate 140 lbs.

Natural wood finish.....Per set, $42.00
Black finish.....Per set, $42.00

Multi-Fit Wheels for Ford



Because of Ford cars having been equipped with Hayes, Kelsey or Firestone rims, it has been necessary for the dealers to carry three different stocks of wheels. The Multi-Fit makes this unnecessary because it will fit all three types of rims.

Made of seasoned Hickory, assembled and finished by skilled workmen.

The Multi-Fit steel felloe is so designed that top edge of front wall is turned back, making a flat flange which is not notched out for wedges, thus adding great strength to the felloe, and also leaving a better clamping surface.

Rim is attached with four bolts so arranged as to make it possible to use Hayes, Kelsey or new Firestone Ford Rims.

A special drive plate is riveted over valve hole so that any Standardized, Firestone, or Straight Side Stanweld rim will fit on this 30x3½ Demountable Wheel.

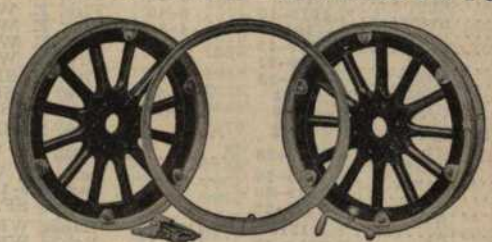
Only a wrench is required to assemble the Multi-Fit Wheel on old hub. Consumer profits by using his old rim, clamps, wedges, bolts, etc., on the Multi-Fit.

Finished in Black or Natural Wood.

Packed in standard crates of 8 wheels each. Weight per crate 100 lbs.

Multi-Fit Wheels.....Each, $6.00

Demountable Rim Truck Wheels for Ford

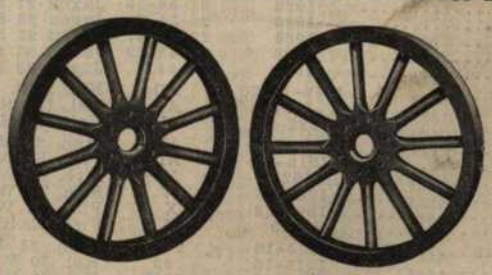


Made of seasoned Hickory, assembled and finished by skilled workmen.

A set consists of two 32x4½ wood wheels—three 32x4½ S. S. Jaxon Demountable Rims, wedges, bolts and wrench. Bored for Ford hub and hub bolts. Finished in black. Packed 1 set to the crate. Weight per crate 118 lbs.

Demountable Rim Truck Wheels for Ford..Per set, $46.50

Standard S. A. E. Band Truck Wheels for Ford

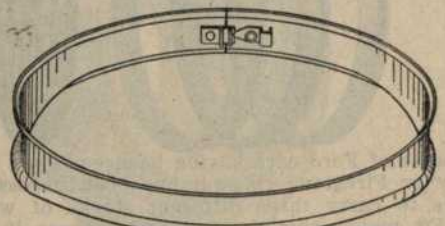


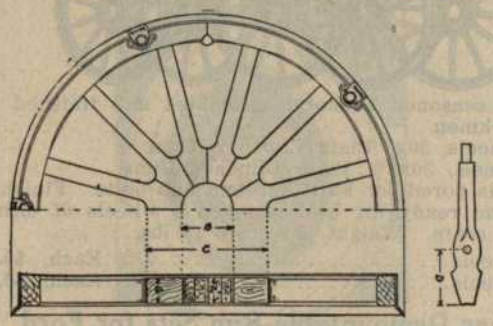
Made of seasoned Hickory, assembled and finished by skilled workmen.

A set consists of two 32x3½ wheels with S. A. E. band attached, ready for the solid tire and the Ford hub. Finished black. Packed 2 wheels to the crate. Weight per crate 70 lbs.

Standard S. A. E. Band Truck Wheels for Ford.
.....Per pair, $29.00

Replacement Wheels and Rims





These Wheels are furnished without hubs or brake drums, but are machined to factory specifications ready to in stall on the original hubs. Furnished with prime coat of paint only. Extra charge for painting.

In ordering always specify make and model of car, whether front or rear wheel, kind of rim and size. Also stat whether wheels only, rims only, or both wheels and rims are wanted. Rims are regular standard rims same as originals

MAKE OF CAR	Year	Model	Type Rim and Felloe	Rim Size	Rim Only Each	FRONT WHEEL No. Spokes	FRONT WHEEL Stock No.	REAR WHEEL No.-Type Spokes	REAR WHEEL Stock No.	Wheel Less Rim Each
Allen	1916–17–18	32–37–41	Fire. E. WF.	32x3½	4.25	12	1F	12PL	1R	10.7
"	1919–20–21	.....	Stan. 21 WF.	32x4	3.20	12	90F	12PL	90R	11.2
"	1919–22	.....	Fire. E. WF.	32x4	4.35	12	9F	12PL	9R	11.3
Anderson	1918–19	.....	Fire. E. WF.	33x4	4.70	12	27F	12PL	27R	11.3
"	1919–23	.....	Fire. E. WF.	32x4	4.35	12	10F	12PL	10R	11.3
"	1923	.....	Fire. E. SF.	32x4	4.35	12	196F	12PL	196R	9.3
"	1923	Alum. Six	Fire. E. SF.	33x4	4.70	12	206F	12PL	206R	9.3
Apperson	1916–17–18	.....	Fire. E. WF.	34x4	5.00	12	36F	12PL	36R	12.0
"	1919	19A	Fire. E. WF.	32x4	4.35	12	11F	12PL	11R	11.3
"	1919	19	Fire. E. WF.	34x4½	5.60	12	64F	12PL	64R	13.3
"	1920–22	.....	Fire. E. WF.	33x4	4.70	12	28F	12PL	28R	11.3
"	1922–23	.....	Fire. E. WF.	32x4½	5.45	12	52F	12PL	52R	13.3
"	1923	.....	Fire. E. SF.	32x4½	5.45	12	296F	12PL	296R	11.5
Auburn	1915	4–36	Fire. E. WF.	32x4	4.35	12	10F	12PL	10R	11.3
"	1915–16	6–40	Fire. E. WF.	34x4	5.00	12	37F	12PL	37R	12.0
"	1916	4–36	Fire. E. WF.	32x3½	4.25	12	2F	12PL	2R	10.7
"	1917–18	All	Fire. E. WF.	34x4	5.00	12	37F	12PL	37R	12.0
"	1919–21	All	Fire. E. WF.	33x4	4.70	12	27F	12PL	27R	11.3
"	1922–23	6–51	Fire. E. SF.	32x4	4.35	12	196F	12PL	196R	9.3
"	1923	6–53	Fire. E. SF.	32x4½	5.45	12	211F	12PL	207R	11.5
"	1923	6–43	Fire. H. SF.	31x4	4.25	12	194F	12PL	194R	8.8
Barley Six	1923	.....	Fire. E. SF.	32x4	4.35	12	199F	12B	200BR	9.3
Bay State	1920–23	.....	Stan. 76 WF.	32x4	3.20	12	107F	12PL	107R	11.2
Briscoe	1915–19	.....	Jax. 124 WF.	30x3½	2.50	12	79F	12PL	79R	8.0
"	1919–20	.....	Jax. 119-124 WF.	30x3½	2.50	12	79F	12PL	79R	8.0
"	1921–22	.....	Hayes SF.	30x3½	2.00	12	251F	12PL	251R	6.6
Buick	1916	D44–45	Baker WF.	32x4	4.25	12	115F	12PL	115R	11.2
"	1916–17	D44–45	Baker WF.	34x4	4.50	12	118F	12PL	118R	12.0
"	1917	D34–35	Baker 118 WF.	30x3½	2.50	12	113F	12PL	113R	8.0
"	1918	E34–35	Perl. WF.	30x3½	2.50	12	120F	12PL	120R	8.0
"	1918	E44–47	Perl. WF.	34x4	4.20	12	127F	12PL	127R	12.0
"	1918	E49–50	Perl. WF.	34x4½	4.90	12	130F	12PL	130R	13.3
"	1919	H44–45	STZD (Tim) WF.	33x4	3.60	12	140F	12PL	140R	11.2
"	1919	H49–50	STZD WF.	34x4½	4.25	12	152F	12PL	151R	13.3
"	1920	K44–47	STZD (Tim) WF.	33x4	3.60	12	140F	12PL	140R	11.2
"	1920	K44–47	STZD (Ball) WF.	33x4	3.60	12	141F	12PL	141R	11.2
"	1920	K49–50	STZD WF.	34x4½	4.25	12	151F	12PL	151R	13.3
"	1921	21–44–47	Hayes BU. SF.	33x4	4.40	12	260F	12PL	260R	11.0
"	1921	21–49–50	Hayes BU. SF.	34x4½	5.00	12	264F	12PL	264R	12.0
"	1922	22–34–35	Jaxon 27 SF.	30x3½	3.25	12	266F	12PL	266R	7.2
"	1922	22–44–47	Jaxon 27 SF.	33x4	3.75	12	271F	12PL	271R	9.0
"	1922	22–48–50	Jaxon 27 SF.	34x4½	4.40	12	275F	12PL	275R	10.0
"	1922	22–54–55	Jaxon 27 SF.	32x4½	4.15	12	272F	12PL	272R	9.2
"	1923	23–34–38	Jaxon 23 SF.	30x3½	3.25	12	267F	12PL	267R	7.2
"	1923	23–34–47	Jaxon 23 SF.	32x4	3.60	12	270F	12PL	270R	8.0
"	1923	23–48–50	Jaxon 23 SF.	33x4½	4.25	12	274F	12PL	274R	9.5
"	1923	23–54	Jaxon 23 SF.	32x4½	4.15	12	273F	12PL	273R	9.2
Cadillac	1918–19–20	All	Kel. PSS. WF.	34x4½	9.20	12	154F	12AB	154AR	18.5
"	1921	All	Kel. 120 SF.	34x4½	9.20	12	238F	12AB	238AR	12.3
"	1922–23	All	Kel. 120 SF.	32x4½	7.85	12	236F	12AB	236AR	11.5
Case	1918	All	Stan. 21 WF.	34x4	4.20	12	100F	12PL	100R	12.0
"	1919–20	All	Fire. E. WF.	34x4	5.00	12	34F	12PL	38R	12.0
"	1921	X	Fire. E. WF.	34x4½	5.60	12	65F	12PL	65R	13.3
"	1922–23	W	Fire. E. WF.	34x4½	5.60	12	66F	12PL	66R	13.3
"	1922–23	X	Fire. E. WF.	32x4½	5.45	12	283F	12PL	283R	13.3
"	1923	X	Fire. E. SF.	32x4½	5.45	12	208F	12PL	208R	11.5
Chalmers	1915–16	26B	Stan. 21 WF.	34x4½	4.70	10	102F	12PL	102R	13.3
"	1915–16	32	Kel. 30 WF.	34x4	6.05	10	155F	12AB	155AR	12.0
"	1915–17	32B	Kel. 30 WF.	34x4	6.05	10	156F	12AB	156AR	12.0
"	1916–18	6–30 5-P	Kel. 30 WF.	32x4	5.20	12	162F	12AB	162AR	11.2
"	1918–19	6–30 7-P	Kel. 100 WF.	34x4	6.10	12	170F	12AB	170AR	12.0
"	1919–22	.....	Kel. 110 SF.	32x4	3.80	12	225F	12AB	225AR	9.3
"	1922–23	All	Kel. 210 SF.	32x4	3.80	12	243F	12AB	243AR	9.3

PL—Indicates plain spokes in rear wheel.

AB—Alternate embossed spokes in rear wheel.
B—All embossed spokes in rear wheel.

We can also furnish wheels and rims for the latest model cars at proportionate prices. In ordering specify mak model and year of car, rim size and whether wanted for front or rear.

Replacement Wheels and Rims—Continued

MAKE OF CAR	Year	Model	Type Rim and Felloe	Rim Size	Rim Only Each	FRONT WHEEL No. Spokes	FRONT WHEEL Stock No.	REAR WHEEL No.-Type Spokes	REAR WHEEL Stock No.	Wheel Less Rim Each
Chandler	1914–19	All	Fire. E. WF.	34x4	5.00	10	39F	12PL	39R	12.00
"	1919–21	.....	STZD WF.	33x4	3.60	10	142F	12PL	142R	11.20
"	1920–22	.....	Fire. E. WF.	33x4	4.70	10	29F	12PL	29R	11.20
"	1922	Some	Fire. E. SF.	33x4	4.70	12	204F	12PL	204R	9.30
"	1923	.....	Fire. E. SF.	32x4	4.70	12	197F	12PL	197R	9.30
Climber	1922–23	.....	STZD WF.	32x4½	4.15	12	184F	12AB	184AR	13.35
"	1922–23	.....	STZD WF.	33x4	3.60	12	144F	12PL	143R	11.20
Chevrolet	1918–21	490	Jax. 119 WF.	30x3½	2.10	12	121F	12PL	121R	6.60
"	1919–22	F.B.	Jax. STZD WF.	32x3½	3.25	12	138F	12PL	133R	10.70
"	1919–21	Truck	Jax. STZD WF.	34x4½	4.25	.....	.....	12PL	152R	13.35
"	1922–23	490 T&R	Hayes 127 SF.	30x3½	1.80	12	252F	12PL	252R	6.60
"	1922–23	490 C-S	Hayes SS. SF.	30x3½	2.75	12	253F	12PL	253R	6.60
"	1919–21	Truck	Jax. STZD WF.	32x3½	3.25	12	295F	.....	.....	10.70
"	1923	Truck	Hayes ST.	34x4½	4.50	.....	.....	12PL	265R	12.30
"	1923	Truck	Jax. STZD WF.	32x3½	3.25	12	295F	.....	.....	10.70
Cleveland	1919–22	.....	Fire. E. WF.	32x4	4.35	12	12F	12PL	12R	11.20
"	1923	.....	Fire. H. SF.	31x4	4.25	12	279F	12PL	279R	8.80
"	1922–23	.....	Fire. E. SF.	32x4	4.35	12	198F	12PL	198R	9.30
Cole	1916	All	Fire. E. WF.	34x4	5.00	12	40F	12AB	40AR	12.00
"	1919–23	Part	Fire. E. WF.	32x4½	5.45	12	53F	12AB	53AR	13.35
Columbia	1919–22	All	Fire. E. WF.	32x4	4.35	12	13F	12PL	13R	11.20
"	1923	All	Jaxon 28 SF.	30x3½	3.25	12	268F	12PL	268R	7.25
Commonwealth	1918–19	.....	Stan. 21 WF.	32x3½	3.10	12	82F	12PL	82R	10.70
"	1919–21	.....	Stan. 76 WF.	32x4	3.20	12	108F	12PL	108R	11.20
Cunningham	1919–21	All	Fire. C. WF.	34x4½	8.30	12	67F	12B	67BR	13.35
"	1922–23	All	Fire. C. WF.	32x4½	8.05	12	53F	12B	54BR	13.35
Daniels	1916–21	All	Fire. C. WF.	34x4½	8.30	12	68F	12AB	68AR	13.35
"	1922–23	All	Fire. C. WF.	32x4½	8.05	12	55F	12AB	55AR	13.35
Davis	1916–18	.....	Fire. E. WF.	34x4	5.00	12	41F	12PL	41R	12.00
"	1919–21	.....	Fire. E. WF.	33x4	4.70	12	30F	12PL	30R	11.20
"	1922–23	.....	Fire. E. WF.	32x4	4.35	12	15F	12PL	26R	11.20
Dixie Flyer	1917–18	All	Fire. E. WF.	32x3½	4.25	12	3F	12PL	3R	10.70
"	1919–20	All	Stan. 76 WF.	32x3½	3.10	12	106F	12PL	106R	10.70
"	1921–23	All	Stan. 76 WF.	32x4	3.20	12	108F	12PL	108R	11.20
Dodge Bros.	1915–16	All	Stan. 21 WF.	32x3½	3.10	12	83F	12PL	83R	10.70
"	1917	All	Kel. 100 WF.	32x3½	3.45	12	164F	12PL	164R	10.70
"	1918–20	All	D-B WF.	32x3½	3.10	12	173F	12PL	173R	10.70
"	1920	Late	Kel. 110 SF.	32x3½	3.45	12	224F	12PL	218R	8.80
"	1921	All	Kel. 110 SF.	32x3½	3.45	12	224F	12AB	224AR	8.80
"	1922	All	Kel. 210 SF.	32x4	3.80	12	244F	12AB	244AR	9.30
"	1923	Part	Kel. 210 SF.	32x4	3.80	12	244F	12AB	244AR	9.30
"	1922–23	Com.	Kel. 210 SF.	32x4	3.80	12	244F	12AB	245AR	9.30
Dorris	1919–20	.....	Fire. C. WF.	34x4½	8.30	12	69F	12AB	69AR	13.35
"	1920	.....	Perl. WF.	32x4½	4.70	12	129F	12AB	129AR	13.35
"	1921–22	All	Fire. C. WF.	32x4½	8.05	12	56F	12AB	56AR	13.35
"	1923	All	Fire. C. WF.	32x4½	8.05	12	56F	12B	284BR	13.35
Dort	1917–19	All	Jax. 124 WF.	30x3½	2.10	12	122F	12PL	122R	8.00
"	1920–21	All	Jax. 119 WF.	30x3½	2.10	12	124F	12PL	124R	8.00
"	1922–23	4 cyl.	Cwc. ss. stzd wf.	30x3½	3.00	12	132F	12PL	132R	8.00
"	1923	6 cyl.	Cwc. ss. stzd wf.	32x4	3.50	12	135F	12PL	135R	11.20
Durant	1922	A22	Fire. H. SF.	30x3½	2.40	12	186F	12PL	186R	6.60
"	1922–23	B22	Hayes SF.	32x4½	4.50	12	262F	12PL	262R	11.55
"	1923	A23	Hay. Dur. SF.	30x3½	3.00	12	254F	12PL	254R	6.60
Earl	1922–23	All	Hayes SF.	32x4	3.25	12	257F	12PL	257R	9.30
Elcar	1916–18	All	Fire. E. WF.	32x3½	4.25	12	3F	12PL	3R	10.70
"	1919–22	.....	Stan. 21 WF.	32x3½	3.10	12	285F	12PL	285R	10.70
"	1923	.....	Stan. 76 WE.	32x4	3.20	12	286F	12PL	286R	11.20
"	1923	.....	Fire. E. SF.	31x4	4.25	12	293F	12PL	293R	10.70
Elgin	1916	All	Stan. 21 WF.	32x3½	3.10	12	84F	12PL	84R	10.70
"	1917	.....	Fire. E. WF.	32x3½	4.25	12	287F	12PL	4R	10.70
"	1917–18–19	All	Fire. E. WF.	32x3½	4.25	12	4F	12PL	4R	10.70
"	1920	All	Fire. E. WF.	33x4	4.70	12	29F	12PL	35R	11.20
"	1921–23	All	Fire. E. WF.	32x4	4.35	12	13F	12PL	15R	11.20
Essex	1919–21	All	Kel. 110 SF.	32x4	3.80	12	226F	12AB	226AR	9.30
"	1922–23	All	Fire. E. SF.	32x4	4.35	12	210F	12AB	210AR	9.30
Ford	1919–23	C&S (part)	Kel. 88 SF.	30x3½	1.80	12	219F	12PL	219R	4.75
"	1919–23	C&S (part)	Hayes 127 SF.	30x3½	1.80	12	252F	12PL	252R	4.75
"	1919–22	Trk (part)	Kel. 115 SF.	32x4½	4.00	.....	.....	12PL	241R	9.00
"	1919–23	Trk (part)	Hayes SF.	32x4½	4.00	.....	.....	12PL	263R	9.00
"	1923	C & S	Fire. K. SF.	30x3½	1.80	12	187F	12PL	187R	4.75
"	1923	Trk (part)	Kel. 118 SF.	32x4½	4.00	.....	.....	12PL	241R	9.00
Franklin	1922–23	.....	Rubsan. SF.	32x4	3.20	12	276F	12PL	276R	9.30
Gardner	1919–21	.....	Jax. STZD WF.	32x3½	3.25	12	134F	12PL	134R	10.70
"	1921	Closed	Jax. STZD WF.	32x4	3.50	12	136F	12PL	136R	11.20
"	1922–23	All	Hayes SF.	32x4	3.25	12	257F	12PL	258R	9.30
Grant	1920–21	All	Fire. E. WF.	32x4	4.35	12	16F	12PL	16R	11.20
"	1922–23	All	Fire. E. SF.	32x4	4.35	12	199F	12PL	199R	9.30
Gray	1922–23	All	Kel. 88 SF.	30x3½	1.80	12	219F	12PL	219R	4.75
Hanson	1919–22	.....	Kel. 110 SF.	32x4	3.80	12	226F	12AB	226AR	9.30
"	1922–23	.....	Kel. 210 SF.	32x4	3.80	12	246F	12AB	246AR	9.30
Haynes	1916	6–36	Gdy. B. WF.	34x4	7.35	12	176F	12PL	176R	12.00
"	1917–18	37–39	Fire. E. WF.	34x4	5.00	12	37F	12PL	42R	12.00
"	1918–21	45–48	Fire. E. WF.	34x4½	5.60	12	70F	12PL	70R	13.35
"	1922	55	Fire. E. SF.	32x3½	4.25	12	190F	12PL	190R	8.80
"	1922	75	Fire. E. SF.	34x4½	5.60	12	215F	12PL	215R	12.30
"	1922–23	55	Fire. E. SF.	32x4½	5.45	12	209F	12PL	209R	11.55
"	1923	77	Fire. E. WF.	34x4½	5.60	10	70F	12PL	70R	13.35
Holmes	1919–23	All	Fire. E. WF.	34x4½	5.60	12	71F	12PL	71R	13.35
Hudson	1916–17	.....	Kel. 30 WF.	34x4	6.05	10	156F	12AB	156AR	12.00
"	1918	M-Super	Kel. 100 WF.	34x4	6.10	10	169F	12AB	169AR	12.00
"	1918–19	Sport	Kel. 30 WF.	32x4½	6.40	10	163F	12AB	163AR	13.35
"	1919–21	All	Kel. 120 SF.	34x4½	9.20	12	239F	12AB	239AR	12.30
"	1922–23	.....	Fire. E. SF.	34x4½	5.60	12	216F	12AB	216AR	12.30

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Replacement Wheels and Rims—Continued

MAKE OF CAR	Year	Model	Type Rim and Felloe	Rim Size	Rim Only Each	FRONT WHEEL No. Spokes	FRONT WHEEL Stock No.	REAR WHEEL No.-Type Spokes	REAR WHEEL Stock No.	Wheel Less Rim Each
Hupmobile	1915	All	Kel. 30 WF.	34x4	6.05	12	157F	12PL	157R	12.00
"	1916	All	Kel. 30 WF.	34x4	6.05	12	157F	12PL	158R	12.00
"	1917	All	Fire. E. WF.	34x4	5.00	12	43F	12PL	43R	12.00
"	1918–19	All	Fire. E. WF.	32x4	4.35	12	17F	12PL	17R	11.20
"	1919–20	All	Kel. 100 WF.	32x4	5.20	12	166F	12PL	166R	11.20
"	1920–22	.....	Kel. 110 SF.	32x4	3.80	12	232F	12PL	227R	9.30
"	1922–23	.....	Kel. 210 SF.	32x4	3.80	12	247F	12PL	247R	9.30
Jackson	1919–21	.....	Jax. Stzd. WF.	33x4	3.60	12	143F	12PL	141R	11.20
Jeffery	1916–17	.....	Stan. 21 WF.	34x4	4.20	12	92F	12PL	92R	12.00
Jewett	1921	.....	Kel. 88 SF.	30x3½	1.80	12	220F	12PL	220R	6.60
"	1922–23	.....	Kel. 90 SF.	30x3½	2.90	12	222F	12PL	222R	6.60
"	1923	.....	Jaxon 28 SF.	30x3½	3.25	12	269F	12PL	269R	7.20
Jordan	1917–18	7 Pass.	Fire. E. WF.	34x4	5.00	12	44F	12AB	44AR	12.00
"	1918–21	F	Fire. E. WF.	32x4	4.35	12	18F	12AB	18AR	11.20
"	1922	F	Fire. E. WF.	32x4	4.35	12	15F	12AB	18AR	11.20
"	1918–21	M	Fire. E. WF.	32x4½	5.45	12	57F	12AB	57AR	13.35
"	1923	F	Fire. E. SF.	32x4	4.35	12	200F	12AB	200AR	9.30
"	1922–23	M	Fire. E. SF.	32x4½	5.45	12	210F	12AB	210AR	11.55
King	1916–18	All	Stan. 21 WF.	34x4	4.20	12	93F	12PL	93R	12.00
"	1919–21	.....	Stzd. WF.	32x4½	4.15	12	147F	12AB	147AR	13.35
"	1922–23	.....	Fire. SF.	32x4½	5.66	12	208F	12AB	211AR	11.55
Kissel	1915	4–36 & 42	Stan. 21 WF.	34x4	4.20	12	94F	12PL	94R	12.00
"	1916	4–32	Stan. 21 WF.	32x4	3.20	12	88F	12PL	88R	11.20
"	1916–19	.....	Fire. E. WF.	34x4	5.09	12	45F	12PL	45R	12.00
"	1917	6–38	Fire. E. WF.	32x4	4.71	12	14F	12PL	19R	11.20
"	1917	6–42	Stan. 21 WF.	32x4	3.20	12	88F	12PL	88R	11.20
"	1919–22	.....	Fire. 9. WF.	32x4½	5.66	12	58F	12PL	58R	13.35
"	1923	.....	Fire. E. SF.	32x4½	5.66	12	214F	12AB	214AR	11.55
"	1923	.....	Fire. E. SF.	32x4	4.71	12	294F	12PL	294R	9.30
Lafayette	1920–23	.....	Fire. C. WF.	32x4½	8.09	12	53F	12AB	54AR	13.35
Lexington	1917	6–0	Gtdy. B. WF.	32x4	7.00	12	174F	12PL	174R	11.20
"	1918–19	6–R	Goodrich	Cannot furnish.						
"	1920–21	S	Kel. 110 SF.	32x4	3.80	12	228F	12B	228BR	9.30
"	1922–23	T–U	Kel. 118 SF.	32x4½	4.00	12	242F	12B	242BR	11.55
Liberty	1916–21	All	Fire. E. WF.	32x4	4.71	12	15F	12PL	20R	11.20
"	1922–23	.....	Fire. H. SF.	30x3½	2.50	12	186F	12PL	186R	6.60
Lincoln	1920–23	All	Kel. 120 SF.	32x4½	7.85	12	237F	12AB	237AR	11.55
Locomobile	1918–22	.....	Fire. C. WF.	34x4½	8.70	12	72F	12B	72BR	18.50
Malbohm	1919–22	.....	Stan. 76 WF.	32x4	3.20	12	108F	12PL	108R	11.20
Marmon	1922–23	.....	Fire. E. SF.	32x4½	5.66	12	212F	12PL	212R	13.35
Maxwell	1919	.....	Jax. 119 WF.	30x3½	2.50	12	123F	12PL	123R	8.00
"	1920–21	.....	Kel. 88 SF.	30x3½	1.80	12	221F	12PL	221R	6.60
Mercer	1921–23	Series 5	Fire. C. WF.	32x4½	8.09	12	59F	12B	59BR	13.35
Mitchell	1915–18	C	Stan. 21 WF.	34x4	4.20	12	96F	12PL	96R	12.00
"	1916–18	D	Stan. 21 WF.	32x4	3.20	12	89F	12PL	89R	11.20
"	1919–22	E & F	Stan. 76 WF.	33x4	3.30	12	111F	12PL	111R	11.20
"	1923	.....	Fire. E. SF.	32x4½	5.66	12	213F	12PL	213R	11.55
Moline Knight	1916–19	.....	Fire. E. WF.	34x4	5.09	12	46F	12AB	46AR	12.00
Monroe	1919–21	S	Fire. E. WF.	32x3½	4.29	12	5F	12PL	5R	10.70
Moon	1915–16	.....	Stan. 21 WF.	34x4	4.20	12	94F	12PL	92R	12.00
"	1916	6–30	Stan. 21 WF.	32x3½	3.10	12	87F	12PL	87R	10.70
"	1917–18	.....	Fire. E. WF.	34x4	5.09	12	47F	12PL	47R	12.00
"	1918	6–38	Fire. E. WF.	32x3½	4.29	12	6F	12PL	6R	10.70
"	1919–21	.....	Fire. E. WF.	32x4	4.71	12	19F	12AB	18AR	11.20
"	1922–23	.....	Fire. E. SF.	34x4	5.09	12	48F	12PL	48R	12.00
Nash	1918–19	.....	Fire. E. WF.	34x4	4.20	12	95F	12PL	95R	12.00
"	1918	.....	Stan. 21 WF.	34x4½	4.90	12	131F	12PL	131R	13.35
"	1919	Closed	Perl. WF.	33x4	4.91	12	31F	12PL	31R	11.20
"	1920–21	6 cyl.	Fire. E. WF.	32x3½	4.29	12	7F	12PL	7R	10.70
"	1920–22	4 cyl.	Fire. E. WF.	33x4	4.00	12	261F	12AB	261AR	9.30
"	1922–23	6 cyl.	Hayes SF.	32x4	4.71	12	200F	12AB	200AR	9.30
"	1922–23	6 cyl.	Hayes SF.	33x4	4.00	12	261F	12PL	290R	9.30
"	1922–23	4 cyl.	Fire. E. SF.	32x3½	4.29	12	191F	12PL	191R	8.80
National	1917–19	All	Fire. C. WF.	34x4½	8.70	12	67F	12AB	73AR	13.35
"	1920–23	6–71	Fire. C. WF.	32x4½	8.09	12	53F	12AB	55AR	13.35
"	1923	6–51	Hayes SF.	32x4	3.75	12	289F	12PL	289R	9.30
"	1923	6–31	Stan. 21 WF.	30x3½	3.00	12	288F	12PL	288R	8.00
Oakland	1916	32B	Bak. WF.	32x3½	4.00	12	114F	12PL	114R	10.70
"	1917–18	34B	Bak. WF.	32x4	4.25	12	116F	12PL	116R	11.20
"	1918–20	34B	Perl. WF.	32x4	4.00	12	125F	12PL	125R	11.20
"	1920–23	34C	Stzd. WF.	32x4	3.50	12	137F	12PL	137R	11.20
"	1923	34C	Jaxon 27 SF.	32x4	3.50	12	292F	12PL	292R	8.00
Oldsmobile	1917	45	Bak. WF.	32x4	3.50	12	137F	12B	138BR	11.20
"	1917	37	Bak. WF.	34x4	4.50	12	119F	12B	119BR	12.00
"	1918	45	Perl. WF.	32x4	4.25	12	117F	12B	117BR	11.20
"	1918	37	Perl. WF.	34x4	4.20	12	128F	12B	128BR	12.00
"	1919–21	37	Stzd. WF.	32x4	4.00	12	126F	12B	126BR	11.20
"	1919	45	Stzd. WF.	32x4	3.50	12	136F	12B	138BR	11.20
"	1920–23	45–46	Stzd. WF.	32x4	3.50	12	136F	12B	138BR	11.20
"	1920–23	43–47	Stzd. WF.	34x4½	4.25	12	153F	12B	153BR	13.35
Overland	1915–16	80–82–86	Stan. 21 WF.	34x4	4.20	12	97F	12PL	97R	12.00
"	1915–16	83	Stan. 21 WF.	32x3½	3.10	12	85F	12PL	85R	10.70
"	1916	75	Kel. 75 WF.	30x3½	3.05	12	178F	12PL	178R	8.00
"	1917–18	84–85	Stan. 21 WF.	32x4	3.20	12	91F	12PL	91R	11.20
"	1917–18	88	Stan. 21 WF.	34x4½	4.70	12	103F	12PL	103R	13.35
"	1917–18	90	Stan. 19 WF.	30x3½	2.10	12	80F	12PL	80R	8.00
"	1919–21	Mod. 4	Stan. 119 WF.	30x3½	2.10	12	80F	12PL	81R	8.00
"	1922	Mod. 4	Rubs. SF.	30x3½	2.10	12	277F	12PL	277R	6.60
"	1923	Mod. 4	Hayes SF.	30x3½	1.80	12	255F	12PL	255R	6.60

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Replacement Wheels and Rims—Continued

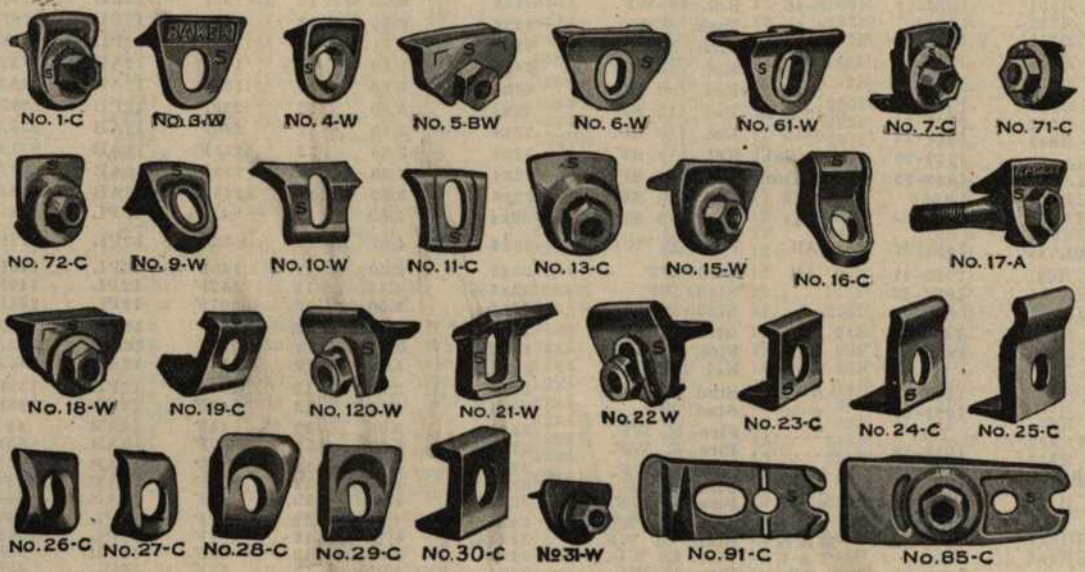
MAKE OF CAR	Year	Model	Type Rim and Felloe	Rim Size	Rim Only Each	FRONT WHEEL No. Spokes	FRONT WHEEL Stock No.	REAR WHEEL No.-Type Spokes	REAR WHEEL Stock No.	Wheel Less Rim Each
Packard	1917–23	12 cyl.	Fire. C. WF.	34x4½	8.70	10	74F	12AB	74AR	13.35
"	1920–22	6 cyl.	Kel. 110 SF.	32x4	3.80	12	226F	12AB	226AR	9.30
"	1922–23	6 cyl.	Fire. E. SF.	32x4	4.71	12	200F	12AB	200AR	9.30
Paige	1916–17	6–46	Kel. 30 WF.	34x4	6.05	12	159F	12AB	159AR	12.00
"	1917	6–38	Park. WF.	32x4	6.50	12	179F	12PL	179R	11.20
"	1918	6–39	Fire. E. WF.	32x4	4.71	12	21F	12PL	21R	11.20
"	1918	6–51	Kel. 100 WF.	34x4	6.10	12	171F	12AB	171AR	12.00
"	1919	6–55	Kel. 100 WF.	32x4	5.20	12	168F	12AB	168AR	11.20
"	1919–22	6–42 & 44	Kel. 110 SF.	32x4	3.80	12	229F	12PL	229R	9.30
"	1919–21	6–55	Kel. 110 SF.	32x4	3.80	12	230F	12AB	230AR	9.30
"	1920–22	6–66 (Sal.)	Kel. 110 SF.	32x4	3.80	12	231F	12AB	231AR	9.30
"	1920–22	6–66(Tim.)	Kel. 110 SF.	32x4	3.80	12	232F	12AB	232AR	9.30
"	1923	6–66	Kel. 210 SF.	32x4	3.80	12	245F	12AB	246AR	9.30
"	1923	6–44	Kel. 210 SF.	32x4	3.80	12	248F	12PL	248R	9.30
Pan American	1921–22	All	Fire. E. WF.	33x4	4.91	12	32F	12PL	32R	11.20
Patterson	1919–21	All	Stzd. WF.	33x4	3.60	12	146F	12PL	146R	11.20
"	1922–23	.....	Stzd. WF.	32x4½	4.15	12	147F	12PL	149R	13.35
"	1923	.....	Stzd. WF.	32x4	3.50	12	291F	12PL	291R	11.20
Peerless	1916–18	All	Fire. E. WF.	34x4	5.09	12	44F	12AB	49AR	12.00
"	1919–22	All	Fire. E. WF.	34x4½	6.12	12	75F	12AB	75AR	13.35
"	1923	All	Kel. 121 SF.	32x4½	5.10	12	240F	12AB	240AR	11.55
Pilot	1919–22	6–45	Stzd. WF.	32x4	3.50	12	139F	12PL	139R	11.20
"	1921–23	6–50	Stzd. WF.	32x4½	4.15	12	148F	12PL	148R	13.35
Premier	1917	.....	Fire. E. WF.	34x4	5.09	12	44F	12AB	44AR	12.00
"	1918–23	.....	Fire. E. WF.	32x4½	5.66	12	60F	12AB	60AR	13.35
R. & V. Knight	1919–22	4 cyl.	Fire. E. WF.	32x4	4.71	12	10F	12AB	10AR	11.20
"	1923	4 cyl.	Fire. E. SF.	32x4	4.71	12	202F	12AB	202AR	9.30
"	1923	6 cyl.	Fire. E. WF.	32x4½	5.66	12	61F	12AB	61AR	13.35
Reo	1914–16	R & S	Stan. 21 WF.	34x4	4.20	12	98F	12PL	98R	12.00
"	1915–18	M & N	Stan. 21 WF.	34x4½	4.70	12	104F	12PL	104R	13.35
"	1918	T & U	Fire. E. WF.	34x4	5.09	12	50F	12PL	50R	12.00
"	1919–22	All	Fire. E. WF.	33x4	4.91	12	33F	12PL	33R	11.20
"	1919–22	Truck	Fire. E. WF.	34x4½	6.12	12	76F	12PL	76R	13.35
"	1922–23	Truck	Fire. E. SF.	34x4½	6.12	12	217F	12PL	217R	12.30
"	1922–23	T6B	Fire. E. SF.	33x4	4.91	12	205F	12PL	205R	9.30
Saxon	1916–18	6 cyl.	Stan. 21 WF.	32x3½	3.10	12	86F	12PL	86R	10.70
"	1919–20	S Y	Fire. E. WF.	32x3½	4.29	12	8F	12PL	8R	10.70
"	1921–23	125G	Fire. E. WF.	32x4	4.71	12	22F	12PL	22R	11.20
Sayers Six	1920–23	All	Stzd. WF.	33x4	3.60	12	144F	12PL	144R	11.20
Sayers Scoville	1920–22	All	Fire. C. WF.	34x4½	8.70	12	73F	12AB	73AR	13.35
"	1923	All	Fire. C. WF.	32x4½	8.09	12	62F	12AB	62AR	13.05
Scripps Booth	1918–19	.....	Perl. WF.	32x4	4.00	12	181F	12PL	181R	11.23
"	1920–22	.....	Kel. 110 SF.	32x4	3.80	12	233F	12PL	233R	9.30
Shaw	1918–22	.....	Fire. C. WF.	32x4	7.34	12	23F	12AB	23AR	11.20
Sheridan	1920–21	6 cyl.	Stzd. WF.	33x4	3.60	12	145F	12PL	145R	11.20
"	1920–21	8 cyl.	Stzd. WF.	32x4½	4.15	12	182F	12PL	182R	13.35
Standard 8	1918–23	.....	Fire. C. WF.	34x4½	8.70	12	75F	12AB	75AR	13.35
Stanley Steamer	1919–22	735	Fire. C. WF.	34x4½	8.70	12	183F	12PL	183R	13.35
"	1923	.....	Fire. C. SF.	32x4½	8.09	12	213F	12AB	213AR	11.55
Star	1922–23	.....	Hayes SF.	30x3½	1.80	12	256F	12PL	256R	6.60
Stearns	1915–16	.....	Stan. 21 WF.	34x4	4.20	12	99F	12B	99BR	12.00
"	1920–23	.....	Fire. E. WF.	34x4½	6.12	12	77F	12B	77BR	13.35
Stephens	1919–20	84	Stan. 21 WF.	32x4	3.20	12	101F	12AB	101AR	11.20
"	1923	10	Stan. 76 WF.	32x4	3.20	12	180F	12PL	180R	11.20
"	1921–23	.....	Stan. 76 WF.	32x4	3.20	12	110F	12AB	110AR	11.20
Studebaker	1915	.....	Kel. 30 WF.	34x4	6.05	12	160F	12PL	160R	12.00
"	1916–17	.....	Kel. 30 WF.	34x4	6.05	12	161F	12PL	161R	12.00
"	1918	.....	Kel. 100 WF.	34x4	6.10	12	172F	12PL	172R	12.00
"	1918–19	.....	Kel. 100 WF.	32x4	5.20	12	167F	12AB	167AR	11.20
"	1918–19	S H 4	Kel. 100 WF.	32x3½	4.60	12	165F	12PL	165R	10.70
"	1920–22	.....	Kel. 110 SF.	32x4	3.80	12	234F	12AB	234AR	9.30
"	1920–22	Light 6	Kel. 110 SF.	32x4	3.80	12	235F	12PL	235R	9.30
"	1922–23	.....	Kel. 210 SF.	32x4	3.80	12	249F	12AB	249AR	9.30
"	1922	Light 6	Kel. 210 SF.	32x4	3.80	12	250F	12PL	250R	9.30
"	1923	Light 6	Kel. 90 SF.	30x3½	3.30	12	223F	12PL	223R	6.60
Templar	1919–22	.....	Fire. E. WF.	32x4	4.71	10	24F	12PL	24R	10.70
Velie	1915–17	.....	Gdy. B.	34x4	7.35	10	177F	12PL	177R	12.00
"	1917–18	.....	Gdy. B.	32x4	7.00	10	175F	12PL	175R	11.20
"	1919–22	Light 6	Fire. E. WF.	32x3½	4.29	12	3F	12PL	1R	10.70
"	1919–22	Big 6	Fire. E. WF.	32x4	4.71	10	20F	12AB	18AR	11.20
"	1923	Light 6	Fire. E. SF.	32x3½	4.29	12	192F	12AB	192AR	8.80
"	1923	Big 6	Fire. E. SF.	32x4	4.71	12	199F	12AB	203AR	9.30
Wescott	1915–18	.....	Fire. E. WF.	34x4	5.09	12	51F	12AB	51AR	12.00
"	1919–22	38	Fire. E. WF.	33x4	4.91	12	34F	12AB	34AR	11.20
"	1919–22	48	Fire. E. WF.	32x4½	5.66	12	63F	12AB	63AR	13.35
"	1923	A 44	Fire. E. WF.	32x4	4.71	12	19F	12AB	18AR	11.20
"	1923	B 44	Fire. E. WF.	32x4½	5.66	12	54F	12AB	57AR	13.35
White	1916–17	G A H	Fire. C. WF.	32x4	7.34	10	25F	12PL	25R	11.20
"	1918	.....	Fire. C. WF.	34x4½	8.70	10	77F	12PL	64R	13.35
Willys Knight	1916–19	.....	Stan. 21 WF.	34x4½	4.70	12	105F	12PL	105R	13.35
"	1920–22	.....	Stan. 76 WF.	33x4	3.30	12	112F	12PL	112R	11.20
"	1922–23	.....	Rubsam. SF.	33x4	3.30	12	278F	12PL	278R	9.30
"	1922	Closed	Stzd. WF.	32x4½	4.15	12	150F	12PL	150R	13.35
"	1923	Closed	Hayes. SF.	32x4½	5.00	12	282F	12PL	282R	11.55
"	1923	.....	Hayes SF.	32x4	3.75	12	257F	12PL	259R	9.30
Winton	1919–23	.....	Fire. C. WF.	34x4½	8.70	12	73F	12AB	78AR	13.35
Yellow Cab	1918–22	.....	Fire. C. WF.	32x4	7.34	12	23F	12AB	23AR	11.20

PL—Indicates plain spokes in rear wheel.

AB—Alternate embossed spokes in rear wheel.
B—All embossed spokes in rear wheel.

We can also furnish wheels and rims for the later cars at proportionate prices. In ordering specify make, model and year of car, rim size and whether wanted for front or rear.

Stone Rim Repair Parts



Standard Packing—1 Dozen in Carton **WEDGES & CLAMPS** **For Replacement Use**

Stock	Rim used on:	For Bolt	For Nut	List
1C	Kelsey No. 100	9	*Sp	$0.25
3W	Baker	4	2N	.15
4W	Detroit	7	10N	.15
5BW	Stanweld 21	7	*Sp	.20
6W	Jaxon 3½"	7	10N	.15
61W	Jaxon, Stzd., Buick	7-10-11	10N	.15
	(For Olds 1920)	3	14N	
7C	Kelsey No. 110	5	*Sp	.25
71C	Kelsey 88 (our 123)	5	*Sp	.15
72C	Kelsey Nos. 115 and 120	5	*Sp	.25
9W	Jaxon No. 124	7	10N	.15
10W	Firestone Wedge	8	6N	.10
11C	Firestone Clamp W. F.	8	6N	.10
13C	Kelsey Univ. and PSS	6	*Sp	.25
15W	Kelsey No. 30	9	*Sp	.25
16C	Kelsey 77 (our 120)	9	8N	.15
17A	Baker Assembly		2N	.30
18W	Dodge	7	*Sp	.20

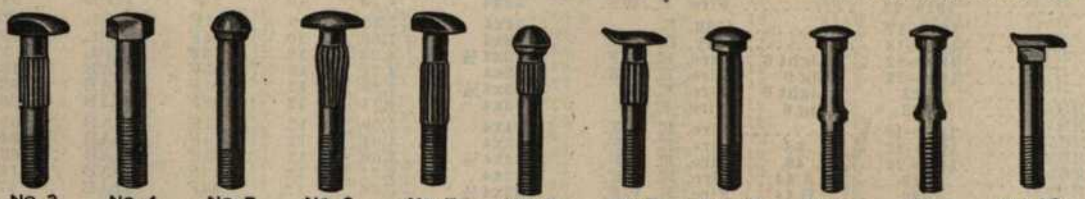
Stock	Rim used on:	For Bolt	For Nut	List
19C	Goodrich-Ford	5A	12N	$0.20
120W	Stanweld 76	7	*Sp	.20
21W	Goodyear	8	4N	.15
22W	Stanweld Cl.	7	*Sp	.20
23C	Kelsey 88 (our 123)	5A	8N	.10
24C	Kelsey No. 110	5	8N	.15
25C	Kelsey No. 210	5	8N	.15
26C	Firestone S. F.	12	6N	.10
27C	Firestone Forging S. F.	12	6N	.15
28C	Rubsam Cl.	13	10N	.15
29C	Rubsam SS	13	10N	.15
30C	Kelsey No. 90	5	8N	.15
31W	Firestone K (our 127)	11A	*Sp	.20
†33W	Jaxon 29 (small)	14	10N	.15
†34W	Jaxon 29 (large)	14	10N	.15
91C	Spare rim carrier			.25
85C	Spare rim carrier, Ford			.30

*Nut is assembled with wedge or clamp.
†Not illustrated.

Standard Packing—1 Dozen in Carton **NUTS** **For Replacement Use**

Stock	For make rim:	For Bolt	List
2N	Baker	No. 4	$0.20
4N	Goodyear	2 and 8	.06
6N	Firestone	8 and 12	.06
8N	Kelsey	5 and 9	.08

Stock	For make rim:	For Bolt	List
10N	Jaxon, Stzd., etc.	7, 10, 11 and 13	$0.06
12N	Goodrich	5	.06
14N	Olds., Stzd.	3	.06
16N	Hayes	5	.08
18N	Hayes	5	.08



Standard Packing—1 Dozen in Carton **BOLTS** **For Replacement Use**

Stock	For Rim:	Ford	3½" Rim	4" Rim	4½" Rim	List
3	Olds., Stzd.			3C	3D	$0.12
4	Baker		4B	4C	4C	.12
5	Kelsey, Hayes S. F.	5A	5B	5C	5D	.12
	Goodrich	5A	5B	5C	5D	
6	Kelsey				6C	.12
7	Jaxon, Stzd., etc.	7B	7B	7C	7D	.12
8	Firestone W. F.	8B	8B	8C	8D	.12

Stock	For Rim:	Ford Size	3½" Rim	4" Rim	4½" Rim	List
9	Kelsey W. F.	9B	9B	9C	9D	$0.12
10	Buick 21			10C	10D	.12
11	Buick 22, 23, Ford	11A	11B	11C	11D	.12
12	Firestone S. F.		12B	12C	12D	.12
13	Rubsam		13B	13C		.12
14	Jaxon		14B	14C		.12

Stone Steel Service Cabinet

The most highly developed method of storing, displaying and selling STONE RIM PARTS.

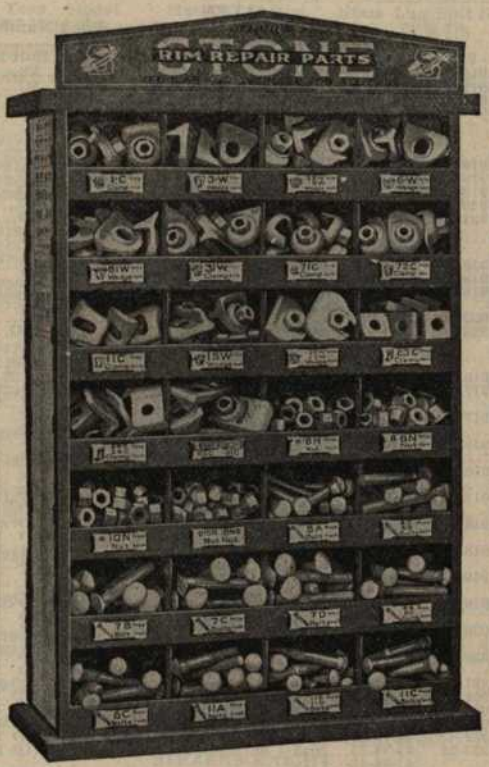
Built of steel, finished in a handsome combination of dark olive green and white, and amply strong to endure hard service.

Removable labels makes it adaptable to any variety of parts desired.

The chart on each side (removable) gives complete and accurate information, insuring prompt service and a satisfied customer.

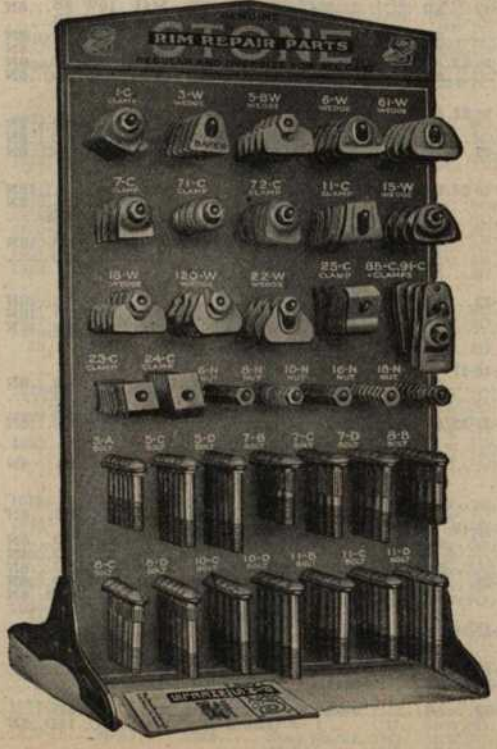
Size 5½" x 17" x 26". Weight Cabinet only, 15 lbs.

The cabinet is free to dealers with either the No. 1 or No. 2 assortment of parts. The assortments contain 37 items for practically every car, including latest models. Only the parts are charged for:



No. 1 Assortment.					No. 2 Assortment				
1	Cabinet	6	5	A Bolt	1	Cabinet	12	5	A Bolt
6	1C	6	5	B	12	1C	6	5	B
6	3W	6	5	C	12	3W	12	5	C
6	5BW	6	5	D	6	5BW	12	5	D
6	6W	6	7	B	12	6W	12	7	B
12	61W	6	7	C	12	61W	12	7	C
6	71C	6	7	D	12	71C	12	7	D
6	72C	6	8	B	12	72C	12	8	B
6	11C	6	8	C	12	11C	12	8	C
6	15W	6	8	D	12	15W	6	8	D
6	18W	6	11	A	6	18W	12	11	A
3	120W	6	11	B	6	120W	6	11	B
3	22W	6	11	C	6	22W	6	11	C
12	23C	6	11	D	12	23C	6	11	D
6	24C	12	6	N Nut	12	24C	24	6	N Nut
6	25C	12	8	N	12	25C	24	8	N
12	31W	12	10	N	12	31W	24	10	N
2	85C	8	16	N	3	85C	12	16	N
2	91C	12	18	N	3	91C	12	18	N
Number parts, 21 dozen. List price, parts, $34.62. Shipping weight, 57 lbs.					Number parts, 34 dozen. List price, parts, $56.07. Shipping weight, 80 lbs.				

Stone Service-Display Board



A stong, serviceable and beautifully lithographed display.

Made of Steel, reinforced and finished a dark green with white lettering.

Will stand on the counter or hang on the wall.

Catalog and charts giving complete selling information accompany each display.

Size: 15½" x 27". Weight board only, 8 lbs.

The Stone Service-Display board is free to dealers with the following assortment which contains 37 items of Stone Rim Parts for practically every car including latest models:

No. 3 Assortment

5	1C	6	5	A Bolt
5	3W	6	5	C
5	5BW	6	5	D
5	6W	5	7	B
5	61W	5	7	C
4	7C	5	7	D
4	71C	6	8	B
5	72C	6	8	C
10	11C	6	8	D
4	15W	6	10	C
5	18W	6	10	D
4	120W	6	11	B
4	22W	6	11	C
9	23C	6	11	D
12	24C	10	6	N Nuts
11	25C	9	8	N
2	85C	10	10	N
3	91C	8	16	N
1	Board	8	18	N

Number parts, 19 dozen.
List price, parts, $31.61.
Shipping weight, 47 lbs.

Rim Part Specifications

Passenger Cars

ALLEN

Year	Model	Size	Make of Rim	Stone Stock Numbers: Rims	Lug	Bolt	Nut
1916-7-8	All	32x3½	Fire E-WF	M41	11C	8B	6N
1919-20-21	All	32x4	Fire E-WF	M42	11C	8C	6N
1921-22	All	32x4	Std.	S42	61W	7C	10N
			Stone	C42	61W	7C	10N

APPERSON

1916-7-8	All	34x4	Fire E-WF	M46	11C	8C	6N
1919	19-A	32x4	Fire E-WF	M42	11C	8C	6N
1919-20	19-Ann	34x4½	Fire E-WF	M47	11C	8D	6N
1920	8-20	33x4	Fire E-WF	M44	11C	8C	6N
1921-22-23	All	34x4½	Fire E-WF	M47	11C	8D	6N

AUBURN

1916-17		34x4	Fire E-WF	M46	10W	8C	6N
1918	Sport	32x4	Fire E-WF	M42	11C	8C	6N
1919-20-21	All	32x4	Fire E-WF	M42	11C	8C	6N
		33x4	Fire E-WF	M44	11C	8C	6N
1922	All	32x4	Fire E-WF	M42	11C	8C	6N
1923	All	32x4	Fire E-SF	M42	26C	12C	6N

BUICK

1916	D54-55	36x4½	Baker	A49	17A			2N
1917	D34-35	30x3½ Cl.	Baker	118	8W	7B		10N
			Stone I	C40	8W	7B		10N
1917	D45	34x4	Baker	A46	3W	4C		2N
			Stone I	C46	3W	4C		2N
1918	E34-35	30x3½ Cl.	Per	125	6W	7B		10N
			Stone I	C40	6W	7B		10N
1918	E44-45	34x4	Per	P46	61W	7C		10N
			Stone I	C46	61W	7C		10N
1918	E46-47	34x4	Per	P46	61W	7C		10N
			Stone I	C46	61W	7C		10N
1918	E49-50	34x4½	Per	P47	61W	7D		10N
			Stone I	C47	61W	7D		10N
1918	E37	32x3½	Per	P41	61W	7B		10N
			Stone I	C41	61W	7B		10N
1919	H44-45	33x4	Std	S44	61W	7C		10N
			Stone I	C44	61W	7C		10N
1919	H49-50	34x4½	Std	S47	61W	7D		10N
			Stone I	C47	61W	7D		10N
1920	K44-47	33x4	Std	S44	61W	7C		10N
			Stone I	C44	61W	7C		10N
1920	K49-50	34x4½	Std	S47	61W	7D		10N
			Stone I	C47	61W	7D		10N
1921	21-44-47	33x4	Buick 21	Z44	61W	10C		10N
1921	21-49-50	34x4½	Buick 21	Z47	61W	10D		10N
1922	Four	30x3½ SS	Buick 22	Z40	61W	11B		10N
1922	44-47	33x4	Buick 22	Z144	61W	11C		10N
1922	48-49-50	34x4½	Buick 22	Z147	61W	11D		10N
1923-24	33-34-35-41-44-45-47	30x3½ SS	Buick 23	Z40	61W	11B		10N
		32x4	Buick 23	Z42	61W	11C		10N
	48-49	33x4½	Buick 23	Z45	61W	11D		10N
	54-55	32x4½	Buick 23	Z43	61W	11D		10N

CADILLAC

1916-17	All	36x4½	Kel Univ	U49	13C	6C	
		36x4½	Kel PSS	G49	13C	6C	
1918-19	All	34x4½	Kel PSS	G47	13C	6C	
1920-21	59	34x4½	Kel PSS	G47	13C	6C	
		34x4½	Kel No. 120	F47	72C	5D	
1922-23	61	32x4½	Kel No. 120	F43	72C	5D	

CASE

1918	All	34x4	Stan No. 21	D46	5BW	7C		
			Stone I	C46	5BW	7C		
1919-20-21	All	34x4	Fire E-WF	M46	11C	8C		6N
1922	All	34x4½	Fire E-WF	M47	11C	8D		6N
1923	All	32x4½	Fire E-WF	M43	11C	8D		6N

CHALMERS

1917	35-5-P	32x4	Kel. No. 30	E42	15W	9C		
			Stone I	C42	15W	9C		
1917	35-7-P	34x4	Kel No. 30	E46	15W	9C		
			Stone I	C46	15W	9C		
1918	6-30-5-P	32x4	Kel No. 30	E42	15W	9C		
			Stone I	C42	15W	9C		
1918	6-30-7-P	34x4	Kel No. 30	E46	15W	9C		
			Stone I	C46	15W	9C		
			Kel No. 100	J46	1C	9D		
1919 to 22	All	32x4	Kel No. 110	K42	7C-24C	5C		8N

CHANDLER

1915-16-17	All	34x4	Fire E-WF	M46	10W	8C		6N
1918-19	All	34x4	Fire E-WF	M46	11C	8C		6N
1920-21-22	Open	33x4	Fire E-WF	M44	11C	8C		6N
	Closed	33x4	Fire E-WF	M44	11C	8C		6N
1923-4	All	32x4	Fire E-SF	M42	26C	12C		6N

CHEVROLET

1918	FA-2-5	32x3½	Perl	P41	6W	7B		10N
			Stone I	C41	6W	7B		10N
1918	D	34x4	Perl	P46	6W	7C		10N
			Stone I	C46	6W	7C		10N
1919	B-G	32x3½	Std	S41	61W	7B		10N
			Stone I	C41	61W	7B		10N
1919-22	490	30x3½ Cl.	Jaxon	119	6W	7B		10N
			Stone I	C40	6W	7B		10N
1922	490	30x3½ Cl.	Hayes	116	*4	5A		16N
1920-23	M-F-B	32x3½	Std	S41	61W	7B		10N
			Stone I	C41	61W	7B		10N
1923	490 Open	30x3½ SS	Hayes	YF40	*4	5A		16N
	490 Closed	30x3½ SS	Hayes	YS40	*4	5A		16N
	Truck	34x4½	Hayes	YH47	*6	5D		16N
	Sup.& CC	31x4 Cl.	Hayes	128	*4	5B		16N

CLEVELAND

1919 to 22	All	32x4	Fire E-WF	M42	11C	8C		6N
1923	All	32x4	Fire E-SF	M42	26C	12C		6N

COLE

Year	Model	Size	Make of Rim	Stone Stock Numbers: Rims	Lug	Bolt	Nut
1916-17	All	34x4	Fire E-WF	M46	10W	8C	6N
1918	870-1-2	32x4½	Goodr No. 8			5D	12N
1918	Others	34x4	Goodr No. 9			5C	12N
1919-20	All	32x4½	Kel No. 30	E43	15W	9D	
1919-20	All	32x4½	Fire E-WF	M43	11C	8D	6N
1921-22-23	All	32x4½	Fire E-WF	M43	11C	8D	6N

COLUMBIA

1922	All	32x4	Fire E-WF	M42	11C	8C		6N
1923	All	32x4	Fire E-SF	M42	26C	12C		6N
		30x3½ SS	Jaxon-28	R40	33W	14B		10N

CUNNINGHAM

1919 to 22	All	34x4½	Fire E-WF	M47	11C	8D		6N
			Fire C-WF	L47	11C	8D		6N
1923	All	32x4½	Fire C-WF	L43	11C	8D		6N

DANIELS

1918 to 21	All	34x4½	Fire E-WF	M47	11C	8D		6N
			Fire C-WF	L47	11C	8D		6N
1922	All	32x4½	Fire C-WF	L43	11C	8D		6N

DAVIS

1920-22	All	33x4	Fire E-WF	M44	11C	8C		6N
1923	All	32x4	Fire E-WF	M42	11C	8C		6N

DIXIE-FLYER

1921-22-23	All	32x4	Stone I	C42	120W	7C		

DODGE

1915-16	All	32x3½	Stan No. 21	D41	5BW	7B		
			Stone I	C41	5BW	7B		
1917	All	32x3½	Kel No. 100	J41	1C	9C		
1918-19	All	32x3½	Dodge	T41	18W	7B		
			Stone I	C41	18W	7B		
1920	All	32x3½	Kel No. 110	K41	7C	5B		
			Dodge or SI	T41	18W	7B		
1921-22-23	All	32x3½	Kel No. 110	K41	7C-24C	5B		8N
		32x4	Kel No. 210	K242	25C	5C		8N

DORT

1917 to 21	All	30x3½ Cl.	Jaxon	119	6W	7B		10N
			Stone I	C40	6W	7B		10N
1922-23	All	30x3½ SS	Std	S40	6W	7B		10N
		30x3½ SS	Jaxon 29	V40	33W	14B		10N

DURANT

1922-23	Four	30x3½ SS	Hayes	YD40	*5	5A		16N
	Four	30x3½ SS	Fire H	MH40				
	Six	32x4½	Hayes	YH43	*6	5D		16N

EARL

1921-22	All	30x3½ Cl.	Hayes	116	*4	5A		18N
1922-23	All	32x4	Hayes	YH42	*5	5C		16N

ELGIN

1916-17	All	32x3½	Fire E-WF	M41	10W	8B		6N
			Stone I	C41	5BW	7B		
1918	All	32x4	Fire E-WF	M42	11C	8C		6N
1919	All	32x3½	Fire E-WF	M41	11C	8B		6N
1920 to 22	All	33x4	Fire E-WF	M44	11C	8C		6N
1923	All	32x4	Fire E-SF	M42	26C	12C		6N

ESSEX

1919 to 22	All	32x4	Kel No. 110	K42	7C-24C	5C		8N
1922	Part	32x4	Kel No. 210	K242	25C	5C		8N
1922-23	Part	32x4	Fire E-SF	M42	26C	12C		6N

FORD

1919 to 23	Passenger	30x3½ Cl.	Hayes	116	*4	5A		18N
			Kel No. 88	123	23C	5A		8N
			Fire K	127	31W	11A		
	Truck Front, same as passenger		Hayes	Y143	*6	5D		16N
	Rear 32x4½		Kel No. 118	X43	72C	5D		

GARDNER

1921-22	All	32x3½	Std	S41	61W	7B		10N
			Stone	C41	61W	7B		10N
1923	All	32x4	Hayes	YH42	*5	5C		16N

GRANT

1915-16-17-18	All	32x3½	Fire E-WF	M41	11C	8B		6N
1919	All	32x3½	Stan No. 21	D41	5BW	7B		
			Stone I	C41	5BW	7B		
1920-21-22	All	32x4	Fire E-WF	M42	11C	8C		6N

GRAY

1923	All	30x3½ Cl.	Kel No. 88	123	23C	5A		8N

HAYNES

1917	36-37-38-39	34x4	Fire E-WF	M46	11C	8C		6N
1917-18-19-20	40-41-44	34x4½	Fire E-WF	M47	11C	8D		6N
			Goodyr B	XG47	21W	8D		4N
1921	50	33x4	Fire E-WF	M44	11C	8C		6N
1921-22	47-75	34x4½	Fire E-WF	M47	11C	8D		6N
1922	55	32x3½	Fire E-SF	M41	26C	12B		6N

HUDSON

1916-17-18	Six	34x4	Kel No. 30	E46	15W	9C		
			Stone I	C46	15W	9C		
			Kel No. 100	J46	1C	9D		
1917-18-19	Sptr	32x4½	Kel No. 30	E43	15W	9D		
1919-20-21	Six	34x4½	Kel PSS	G47	13C	6C		
			Kel No. 120	F47	72C	5D		
1922-23	All	34x4½	Kel No. 118	X47	72C	5D		
			Fire E-SF	M47	26C	12D		6N

Rim Part Specifications—Continued

Passenger Cars

HUPMOBILE

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1918	All	32x4	Fire E-WF	M42	11C	8C	6N
			Kel No. 100	J42	1C	9D	
1919	All	32x4	Kel No. 100	J42	1C	9D	
			Kel. No. 110	K42	7C	5C	8N
1920-21	All	32x4	Kel No. 110	K42	24C	5C	8N
1922-23	All	32x4	Kel No. 210	K242	25C	5C	8N

JEWETT

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1922-23	All	30x3½ SS	Kel No. 90	K240	30C	5A	8N
		30x3½ SS	Jaxon 29	V40	33W	14B	10N

JORDAN

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1922	M-X	32x4	Fire E-WF	M42	11C	8C	6N
1922	F	32x4½	Fire E-WF	M43	11C	8D	6N
1923	M-X	32x4	Fire E-SF	M42	26C	12C	6N
	F	32x4½	Fire E-SF	M43	26C	12D	6N

KING

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1921-22	All	32x4½	Stan No. 76	H43	120W7D		
		32x4½	Fire E-WF	M43	11C	8D	6N

KISSEL

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1919 to 22	All	32x4½	Fire E-WF	M43	11C	8D	6N

LAFAYETTE

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1921-22	All	32x4½	Fire C-WF	L43	11C	8D	6N

LEXINGTON

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1917	O	32x4	Goodyr B	XG42	21W	8C	4N
1918	All	34x4	Goodr No.9			8C	12N
1919	All	32-34x4	Goodr No.8			8C	12N
1920-21	All	32x4	Kel No. 110	K42	7C	8C	
1922	S	32x4	Kel No. 110	K42	24C	8C	8N
	T	32x4½	Fire E-WF	M43	11C	8D	6N
1923	All	32x4½	Kel No. 118	X43	72C	5D	

LIBERTY

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1920-21-22	All	32x4	Fire E-WF	M42	11C	8C	6N

LINCOLN

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1921-22-23	All	32x4½	Kel No. 120	F43	72C	5D	

LOCOMOBILE

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1915-16-17-18	All.	36x4½ Cl.	Fire B	B49	11C	8D	6N
1919-20-21-22-23	All.	34x4½	Fire C-WF	L47	11C	8D	6N

MARMON

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1922-23	All	32x4½	Fire E-SF	M43	26C	12D	6N

MAXWELL

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1916-17-19.25		30x3½ Cl.	Jaxon	J19	6W	7B	10N
			Stone I	C40	6W	7B	10N
1920-21	All	30x3½ Cl.	Jaxon	J19	6W	7B	10N
			Stone I	C40	6W	7B	10N
			Kel No. 88-Spec. 6 lugs		71C		5A
1922-23	All	30x3½ SS	Fire E-Disc wheels	M40			

MITCHELL

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1916-17-18.All		32x4	Stan No. 21	D42	5BW	7C	
			Stone I	C42	5BW	7C	
		34x4	Stan No. 21	D46	5BW	7C	
			Stone I	C46	5BW	7C	
1919	Vic	33x4	Stan No. 76	H44	120W	7C	
			Stone I	C44	120W	7C	
1920-21-22.All		32x4	Stan No. 76	H42	120W	7C	
			Stone I	H42	120W	7C	

MOON

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1921	48	32x4	Fire E-WF	M42	11C	8C	6N
1921	68	32x4½	Fire E-WF	M43	11C	8D	6N
1922	All	32x4	Fire E-WF	M42	11C	8C	6N
1923	Part	32x4	Fire E-SF	M42	26C	12C	6N

NASH

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1918	681-3	34x4	Fire E-WF	M46	11C	8C	6N
1918-19	682-4-5	34x4½	Fire E-WF	M47	11C	8D	6N
1920-21-22	681-3	33x4	Fire E-WF	M44	11C	8C	6N
1920-21-22	682-4-5	33x4	Fire E-WF	M44	11C	8C	6N
1921-22-23	Four	32x3½	Fire E-WF	M41	11C	8B	6N
1923	Six	33x4	Hayes	YH44	*5	5C	16N

NATIONAL

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1917-18	All	34x4½	Fire B	B47	11C	8D	6N
1919	All	34x4½	Fire C-WF	L47	11C	8D	6N
1920-21-22-23	All	32x4½	Fire C-WF	L43	11C	8D	6N

OAKLAND

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1918-19	All	32x4	Perl	P42	61W	7C	10N
			Stone I	C42	61W	7C	10N
1919 to 22	All	32x4	Stzd	S42	61W	7C	10N
			Stone I	C42	61W	7C	10N
1923	All	32x4	Stzd-SF	S42	61W	11C	10N
		30x3½ SS	Jaxon 28	R40	33W	14B	10N

OLDSMOBILE

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1918	45	32x4	Perl	P42	61W	7C	10N
			Stone I	C42	61W	7C	10N
1919	37-A	32x4	Perl	P42	61W	7C	10N
			Stone I	C42	61W	7C	10N
1920	45-B	34x4½	Stzd	S47	61W	7D	10N
			Stone I	C47	61W	7D	10N
1919	37-Sedan	33x4	Stzd	S44	61W	7C	10N
			Stone I	C44	61W	7C	10N
1920-21-22-23	All	32x4	Stzd	S42	61W	7C	10N
			Stone I	C42	61W	7C	10N
			Buick 22	Z42	61W	11C	10N
			Jaxon 29	V42	34W	14C	10N

OVERLAND

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1917-18	88	34x4½	Stan No. 21	D47	5BW	7D	
			Stone I	C47	5BW	7D	
1917-18	84-85	32x4	Stan No. 21	D42	5BW	7C	
			Stone I	C42	5BW	7C	

PACKARD

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1919-20-21-22	Twin	34x4½	Fire C	L47	11C	8D	6N
1921	Single	32x4	Kel No. 110	K42	7C	5C	
1922	Single	32x4	Kel No. 210	K242	25C	5C	8N
1923	Twin	32x4½	Fire C-WF	L43	11C	8D	6N

PAIGE

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1918-19	6-39-40	32x4	Par			20C	2B
1918	6-55	34x4	K	J46	1C	9D	
1919	6-55	32x4	L	K42	7C	5C	
		34x4½		G47	13C	6C	
1920-21-22.All		32x4		K42	24C	5C	8N
1923	All	32x4		K242	25C	5C	8N
				V42	34W	14C	10N

PEERLESS

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1917-18	All	34x4	Ve	M46	11C	8C	6N
1919-20-21-22	All	34x4½	ains	M47	11C	8D	6N
1923	All	32x4½	ppers	No. 121.W43	72C	5D	

PEERLESS

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1916-17-18	MM	34x4½	owe	Stan No. 21	D47	5BW	7D
			ach	Stone I	C47	5BW	7D
1916-17-18	RS-TU	34x4		Stan No. 21	D46	5BW	7C
			pp	Stone I	C46	5BW	7C
1919-20-21-22			ow	Fire E-WF	M46	11C	8C	6N
	All	33x4	Fa	Fire E-WF	M44	11C	8C	6N
1923	All	33x4		Fire E-SF	M44	26C	12C	6N

PENNSYLVANIA

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1922-23	All	32	Stzd-Disc Wheel	S42			

SAXON

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1920-21-22	All	32x4	Fire E-WF	M42	11C	8C	6N

STANDARD

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1919 to 22	All	34x4½	Fire C	L47	11C	8D	6N
1923	All	34x4½	Fire C-SF	L47	26C	12D	6N

STAR

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1923	All	30x3½ Cl.	Hayes	Y116	*4	5A	18N

SHERIDAN

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1921-22	All	33x4	Stzd	S44	61W	7C	10N
			Stone I	C44	61W	7C	10N

STEARNS-KNIGHT

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1920-21-22-23	All	34x4½	Fire E-WF	M47	11C	8D	6N

STEPHENS

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1920-21-22.All		32x4	Stan No. 76	H42	120W	7C	
			Stone I	C42	120W	7C	
1923	All	32x4½	Stan. No. 76 WF	H43	120W	7D	
		32x4½	Fire C-WF	L43	11C	8D	6N

STUDEBAKER

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1918	Four	32x3½	Kel No. 30	E41	15W	9B	
			Stone I	C41	15W	9B	
		32x4	Kel No. 100	J42	1C	9D	
1918	Six	34x4	Kel. No. 30	E46	15W	9C	
			Stone I	C46	15W	9C	
			Kel No. 100	J46	1C	9D	
1919	Four	32x3½	Kel No. 100	J41	1C	9C	
1919	Six	32x4	Kel No. 100	J42	1C	9D	
1920-21-22.All		32x4	Kel No. 110	K42	7C		
1922-23	B Six	32x4	Kel No. 210	K242	24C	5C	8N
	L Six	30x3½	Kel No. 91	I40	25C	5C	8N
					30C	5B	8N

VELIE

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1917-18	All	32x4	Goodyr B	XG42	21W	8C	4N
		34x4	Goodyr B	XG46	21W	8C	4N
1919-20-21-22	34	32x3½	Fire E-WF	M41	11C	8B	6N
1919-20-21-22	48	32x4	Fire E-WF	M42	11C	8C	6N
1922-23	58	32x4	Fire E-SF	M42	26C	12C	6N

WESTCOTT

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1920-21-22	38	33x4	Fire E-WF	M44	11C	8C	6N
	48	32x4½	Fire E-WF	M43	11C	8D	6N

WILLYS-KNIGHT

Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1917-18-19.84		34x4½	Stan No. 21	D47	5BW	7D	
			Stone I	C47	5BW	7D	
1920-21-22.Open		33x4	Stan No. 76	H44	120W	7C	
			Stone I	C44	120W	7C	
1922	Closed	32x4½	Stan No. 76	H43	120W	7D	
1923	Open	32x4	Stan No. 76-SF	H42	29C	13C	10N
	Closed	32x4½	Stan No. 76-SF	H43	29C	13D	10N
			Hayes	YH43	*6	5D	16N

WINTON

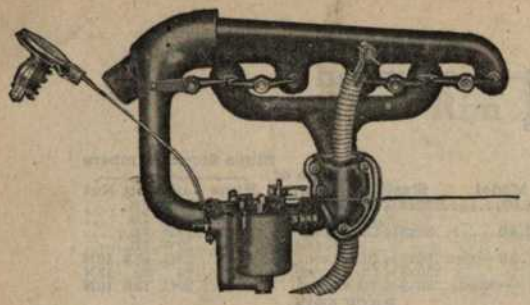
Year	Model	Size	Make of Rim	Stone Stock Numbers Rims	Lug	Bolt	Nut
1919 to 23	All	34x4½	Fire C	L47	11C	8D	6N

Where brackets "{ }" appear embracing a make rim with a "Stone I" rim, it signifies that the "Stone I" rim replaces and is interchangeable with the other.

*Numerals signify number of lugs attached in rim.

Abbreviations: "Fire" for replacement Firestone; "Stan" for Stanweld; "Goodr" for Goodrich; "Perl" for Perlman; "Jax" for Jaxon; "Stzd" for Baker Standardized; "Kel" for Kelsey; "Goodyr" for Goodyear; "Stone I" for Stone Interchangeable; "W. F" for Wood Felloe; "S.F." for Steel Felloe.

Stromberg Carburetors



Recognized as the leading carburetor on the market. The majority of all cars over $1,000.00 are factory equipped and to give owners not equipped the privilege of having superior [illegible] manufacturers have made up specially [illegible] the most prominent makes. The[illegible] quire[illegible] and give better and more flexible power. Insures [illegible]zation of low grade gasoline. Special priming [illegible]makes easy starting. Made for Ford, Chevrolet, Dodge, [illegible]well, Overland Light Four and Dort. Packed one in a box complete with all parts necessary for attaching.

No. A8070—For Ford . . . . . Each, 15.75
No. A8411—For Chevrolet 490 . . . . Each, 19.50
No. A8211—For Dodge . . . . . Each, 19.00
No. A8090—For 1920-21-22 Overland . . . . Each, 17.50
No. 8700—For 1923-24 Model 91 Overland Four . Each, 17.50
No. 8421—For 1918-19 Model 25 Maxwell . . . . . Each, 19.50
No. 8431—For 1920-21-22-23 Model 25 Maxwell. . . . . Each, 19.50

Kingston Handy Carburetor Adjuster

The Kingston Handy Carburetor Adjuster is a great cool weather seller. With a pull-button installed on the steering column, just under the steering wheel, a full one-third turn of the carburetor needle may be made. Easily installed, nothing to get out of order, it will actually save its cost in gasoline in a very short time. Makes winter starting and driving easy. Packed one in a box.
Kingston Handy Carburetor Adjuster . . . . . Each, 1.50

Non-Adjustable Ball Joints

Used exclusively for connecting carburetors and timers with levers on steering wheel. They eliminate all lost motion and give perfect control to spark and throttle levers on automobiles, motor boats, motorcycles, etc. Standard V Thread.

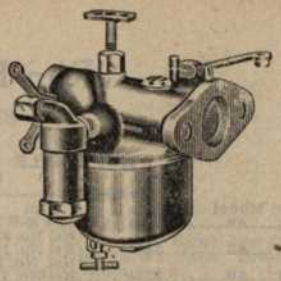
No.	Ball Stems I.D.	Thread	Screw O.D.	Thrd.
1	10	32	5/16	18
2	1/4	20	5/16	18
3	1/4	24	1/4	27
4	1/4	27	1/4	27
5	1/4	28	1/4	28
6	1/4	20	3/8	16

No. 13 . . . . . Each, $0.12
All other numbers . . . . . Each, $0.14

No.	Ball Stems I.D.	Thread	Screw O.D.	Thrd.
7	1/4	20	1/4	20
8	5/16	32	5/16	32
9	7/32	32	7/32	32
12	6	32	10	32
13*	7/32	32	7/32	32

*No. 13 Used on Ford Cars.

No. L4K Kingston Carburetor for Ford



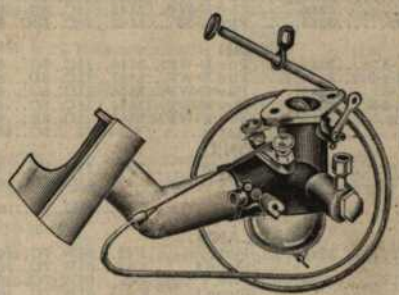
The No. L4K is similar to the Kingston Carburetor furnished to Ford Motor Co. for use in regular production as standard equipment on Ford cars and trucks (made in cast iron only). The No. L4K, however, includes a fuel cleaner attachment which, in these days of constantly lower fuel values, insures the removal of all foreign matter from fuel and a vastly greater power range. Packed one in a box complete with all parts necessary for attaching.

No. L4K . . . . . Each, 5.00

Kingston Carburetors (DeLuxe Models)

Ford

Chevrolet



Maxwell

Overland

These Carburetors are made of a special brass, highly polished. First class workmanship throughout. Made on same general principle as the No. L4K Carburetor for Ford, except the DeLuxe models permit of finer adjustment and also have a high speed valve, and are equipped with a gasoline strainer and steering column control, similar to the Kingston Handy Carburetor Adjuster.

Packed one in a box complete with all parts necessary for attaching. On orders for 3, a special counter display will be included.

No. 36727—For Ford . . . . . Each, 8.00
No. 36728—For Maxwell . . . . . Each, 15.00
No. 36729—For Chevrolet . . . . . Each, 15.00
No. 36730—For Overland . . . . . Each, 15.00

Porter Redi-cut Glass

For Ford Replacements

Shipped from Factory

This is the purest hand-blown triple strength crystal sheet glass cut to exact size and ground on one edge. It is much lower in price than plate glass and is absolutely suitable for replacement purposes.

Body Glass

To Fit Ford Coupe

Pattern No.	Style	Year Model	Each
A	Door Glass	1919-1921	$4.80
B	Door Glass	1922-1923	$4.80
C	Door Glass	1924	$4.80
D	Side Window	1918-1919	$2.90
E	Side Window	1920-1921	$2.90
F	Side Window	1922-1923	$2.90
G	Side Window	1924	$2.90

To Fit Two-Door Sedan

J	Front Window	1916-1921	$4.30
K	Front Window	1922-1923	$4.30
L	Door Glass	1915-1921	$4.80
M	Door Glass	1922-1923	$5.40
O	Rear Side Window	1916-1921	$4.80
P	Read Side Window	1922-1923	$4.80

To Fit Ford Four-Door Sedan

R	Front Door	1923-1924	$4.80
S	Rear Door	1923-1924	$4.80
T	Rear Side Windows	1923-1924	$4.80

To Fit Ford Tudor Sedan

U	Door Glass	1924	$7.20
W	Side Window	1924	$5.40
X	Back Glass	1924	$3.60

Orders must specify style and year model. Above Body glass is packed 6 pieces in a case, either of one size or assorted. Weight approximately 65 lbs. per case. On orders for broken cases or less than six pieces there is an extra charge of 50 cents for boxing.

Windshield Weather Strip

A molded strip running uniform in size and quality, of high grade, black, non-blooming stock. Fits all standard windshields. Regularly carried in 39-inch lengths, packed 15 in a carton.

No. 136—Windshield Weather Strip.....Each, $0.72

Windshield Glass

To Fit Ford
1915-1922 Touring and Roadster
Vertical.

Case	Contains	Weight	Each
No. 1	12 Uppers	85 lbs	$41.20
No. 2	12 Lowers	105 lbs	$46.30
No. 3	6 Each U. & L.	100 lbs	$43.80
No. 61	6 Uppers	50 lbs	$22.00
No. 62	6 Lowers	60 lbs	$24.60
No. 63	3 Each U. & L.	55 lbs	$23.30

To Fit Ford
1923-1924 Touring and Roadster
Slanting.

Case	Contains	Weight	Each
No. 1231	12 Uppers	85 lbs	$41.20
No. 1232	12 Lowers	85 lbs	$41.20
No. 1233	6 Each U. & L.	85 lbs	$41.20
No. 231	6 Uppers	50 lbs	$22.00
No. 232	6 Lowers	50 lbs	$22.00
No. 233	3 Each U. & L.	50 lbs	$22.00

To Fit Ford
1920-1922 Coupe and Sedan
Vertical.

Case	Contains	Weight	Each
No. 9534	6 Lights	50 lbs	$22.00

(Uppers and Lowers are the Same)

To Fit Ford
1924 Tudor Sedan

Case	Contains	Weight	Each
No. TS1	6 Uppers	50 lbs	$22.00
No. TS2	6 Lowers	40 lbs	$19.00
No. TS3	3 Each U. & L.	45 lbs	$20.50

To Fit Ford
1923-1924 Sedan (Four-Door) and 1924 Coupe

Case	Contains	Weight	Each
No. 4D1	6 Uppers	50 lbs	$22.00
No. 4D2	6 Lowers	50 lbs	$19.00
No. 4D3	3 Each U. & L.	50 lbs	$20.50

To Fit Ford
1920-1923 Coupe

Case	Contains	Weight	Each
No. CU23	6 Lights	50 lbs	$22.00

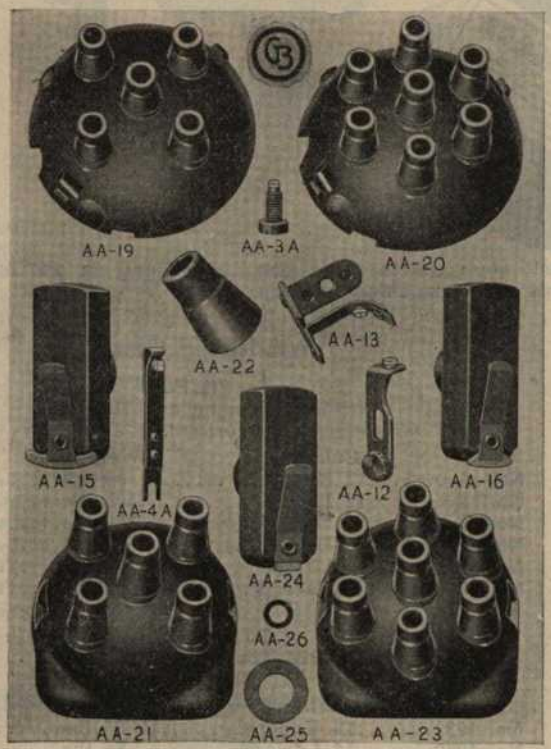
(Uppers and lowers are the same.)

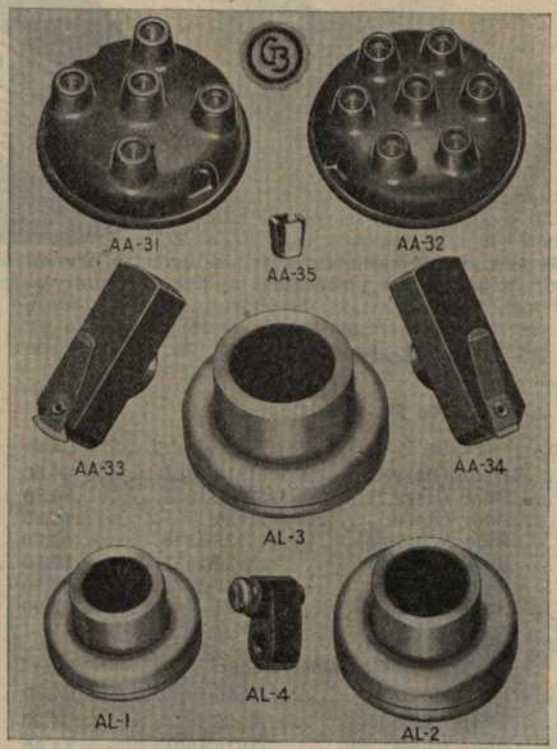
To Fit Ford
1924 Coupe

Case	Contains	Weight	Each
No. CU241	6 Upper	50 lbs	$22.00
No. CU242	6 Lowers	40 lbs	$19.00
No. CU243	3 Each U. & L.	45 lbs	$20.50

Windshield glass is furnished only in full cases as noted above. Orders should specify number of the case wanted.

Ignition Replacement Parts





Ignition Replacement Parts

To Fit Atwater Kent Distributor

AA3a—Tungsten Pointed Contact Screw, to fit Types H, K2 and K3. Used opposite AA4a.

AA4a—Tungsten Pointed Contact Spring, to fit Types H, K2 and K3. Used opposite AA3a.

AA12—Tungsten Pointed Stationary Contact, to fit Types CC and CA. Used opposite AA13.

AA13—Tungsten Pointed Contact Arm, to fit Types CC and CA. Used opposite AA12.

AA15—Distributor Block, complete, to fit Types F, H, K2 and K3, two- and four-cylinder. Used with AA19 distributor cap.

AA16—Distributor Block, complete, to fit Types F, K2 and K3, six-cylinder. Used with AA20 distributor cap.

AA19—Distributor Cap, complete with terminals, to fit Types K2 and K3, four-cylinder. Used with AA15 distributor block.

AA20—Distributor Cap, complete with terminals, to fit Types K2 and K3, six-cylinder. Used with AA16 distributor block.

AA21—Distributor Cap, complete with terminals, to fit Types CC and CA, four-cylinder. Used with AA24 distributor block.

AA22—Distributor Terminal Nut, to fit AA19, 20, 21 and 23 distributor caps.

AA23—Distributor Cap, complete with terminals, to fit Types CC and CA, six-cylinder. Used with AA24 distributor block.

AA24—Distributor Block, complete, to fit Types CC, CA, CA-F, RA-Ford and RA-Vertical, four- and six-cylinder. Used with AA21, 23 and 32 distributor caps.

AA25—Rubber Insulating Washer, to fit terminals on AA19, 20, 21 and 23 distributor caps.

AA26—Shim Washer, for adjusting AA3a.

To Fit Atwater Kent Distributor

AA31—Distributor Cap, to fit Type LA-Ford System, four-cylinder. Used with AA33 distributor block.

AA32—Distributor Cap, to fit Type RA-Vertical, six-cylinder. Used with AA24 distributor block.

AA33—Distributor Block, complete, to fit Type LA-Ford System, four-cylinder. Used with AA31 distributor cap.

AA34—Distributor Block, complete, to fit Type LA-Vertical six-cylinder, as used on Jewett car.

AA35—Secondary Metal Slip Terminal Attachment, used to fasten cable in terminals on all plug terminal type distributor caps.

To Fit Auto-Lite Starter

AL1—Bronze Bearing, small size, graphite impregnated. Inside diameter .003 undersize.

AL2—Bronze Bearing, medium size, graphite impregnated. Inside diameter .003 undersize.

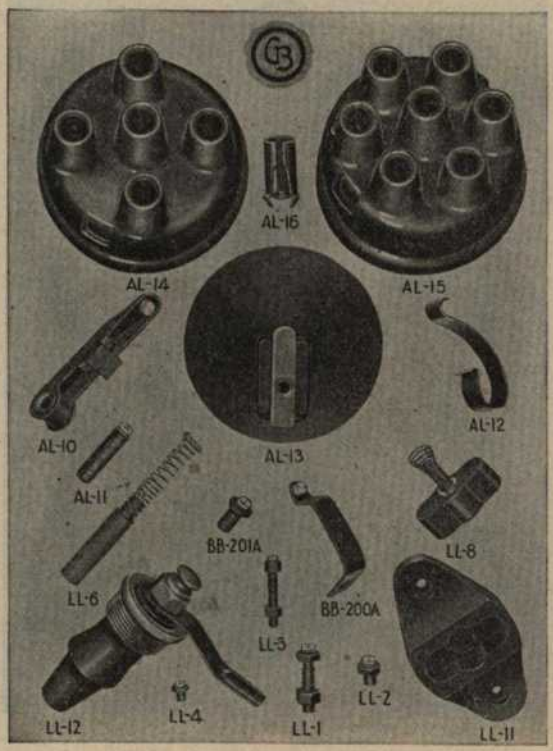
AL3—Bronze Bearing, large size, graphite impregnated. Inside diameter .003 undersize.

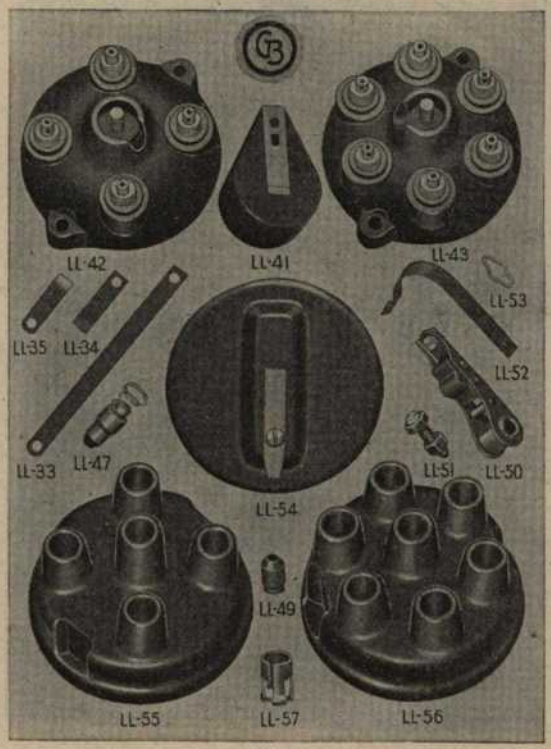
To Fit Auto-Lite Generator

AL4—Brush Holder Post Insulator, used on GH, GG and GD generators. To fit main brush.

For Ignition Replacements Parts Specification Charts, see pages 177-187.

Ignition Replacement Parts—Continued





To Fit Auto-Lite Distributor

AL10—Tungsten Pointed Breaker Lever, to fit all models. Used opposite AL11.

AL11—Tungsten Pointed Contact Screw, to fit all models. Used opposite AL10.

AL12—Tension Spring, to fit AL10 breaker lever.

AL13—Distributor Disc Assembly, to fit all models of four- and six-cylinder. Used with AL14 and 15 distributor covers.

AL14—Distributor Cover, to fit all models of four-cylinder. Used with AL13 distributor disc.

AL15—Distributor Cover, to fit all models of six-cylinder. Used with AL13 distributor disc.

AL16—Secondary Metal Slip Terminal Attachment, used to fasten cable in terminals on AL14 and 15 distributor covers.

To Fit Berling Magneto

BB200a—Platinum Pointed Interrupter Contact Spring, large size point, to fit all types. Used opposite BB201a.

BB201a—Platinum Pointed Interrupter Contact Screw, large size point, to fit all types. Used opposite BB200a.

To Fit Bosch Magneto

LL1—Platinum Pointed Contact Screw, long, to fit all types except those designated after LL3. Used opposite LL2. Will also fit German-Bosch magnetos.

LL2—Platinum Pointed Contact Screw, short, to fit all types except those designated after LL4. Used opposite LL1. Will also fit German-Bosch magnetos.

LL3—Platinum Pointed Contact Screw, long, to fit Types DA, DAV and (BA1 early). Used opposite LL4.

LL4—Platinum Pointed Contact Screw, short, to fit Types DA, DAV and (BA1 early). Used opposite LL3.

LL6—Carbon Collector Brush, with spring, to fit LL12 collector ring brush holder.

LL8—Carbon Distributor Brush, with spring, to fit LL11 distributor brush holder.

LL11—Rotating Distributor Brush Holder, to fit Types DU3, 4 and 6 (independent), DU (dual), DU (duplex) and ZR (new style). For brush to fit this part see LL8.

LL12—Collector Ring Brush Holder, complete with attachments, to fit Types DU3, 4 and 6. For brush to fit this part, see LL6.

To Fit Bosch Magneto

LL33—Tension Spring, flat, for interrupter lever.

LL34—Auxiliary Spring on Boss of Interrupter Disc (square end).

LL35—Auxiliary Spring on Interrupter Lever (round end).

LL41—Distributor Rotor, to fit four- and six-cylinder. Used with LL42 and 43 distributor covers.

LL42—Distributor Cover, four-cylinder, to fit Type B4 Magneto. Complete with metal cased carbon plunger contact. For plunger contact to fit this part see LL47. Used with LL41 distributor rotor.

LL43—Distributor Cover, six-cylinder, to fit Type B6 Magneto. Complete with metal cased carbon plunger contact. For plunger contact to fit this part see LL47. Used with LL41 distributor rotor.

LL47—Carbon Plunger Contact (metal cased), with spring, to fit LL42, 43, 55 and 56 distributor covers.

LL49—Fibre Interrupter Lever Bushing, to fit all types of Bosch interrupter plates.

To Fit Bosch Distributor

LL50—Tungsten Pointed Breaker Lever, to fit all types. Used opposite LL51.

LL51—Tungsten Pointed Contact Screw, to fit all types. Used opposite LL50.

LL52—Tension Spring, to fit LL50 breaker lever.

LL53—Breaker Lever Retaining Clip. Used to hold breaker lever in place on stud.

LL54—Distributor Disc Assembly, to fit all types of four- and six-cylinder. Used with LL55 and 56 distributor covers.

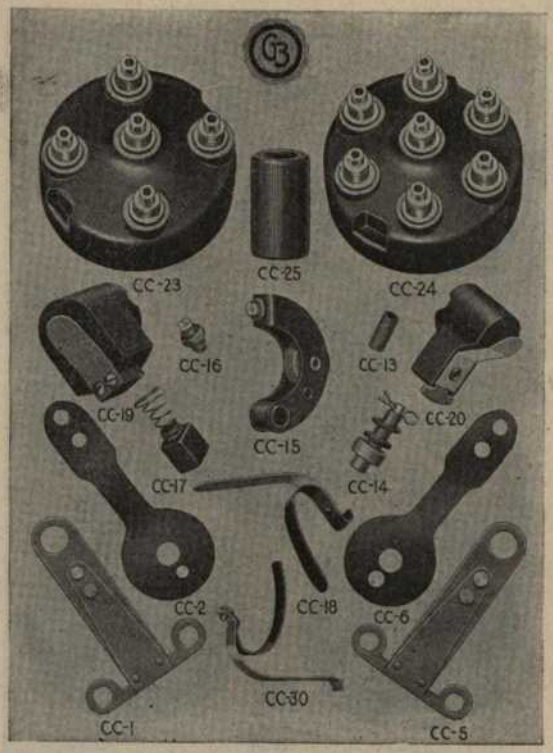
LL55—Distributor Cover, to fit all models of four-cylinder. Complete with metal cased carbon plunger contact. For plunger contact to fit this part see LL47. Used with LL54 distributor disc.

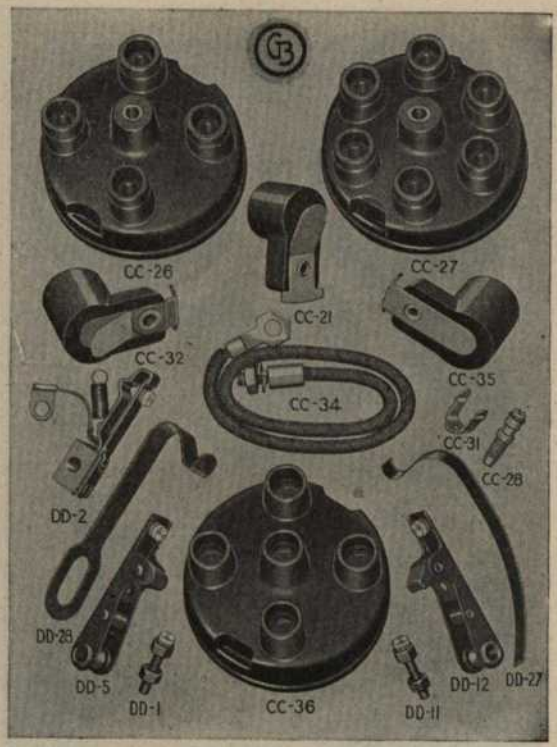
LL56—Distributor Cover, to fit all models of six-cylinder. Complete with metal cased carbon plunger contact. For plunger contact to fit this part see LL47. Used with LL54 distributor disc.

LL57—Secondary Metal Slip Terminal Attachment, used to fasten cable in terminals on LL55 and 56 distributor covers.

For Ignition Replacement Parts Specification Charts, see pages 177-187.

Ignition Replacement Parts—Continued





To Fit Ford and K-W Coils

Used on Ford Cars and Fordson Tractors.

For Vibrator Points used on Fordson Tractors, and for Heavy Duty on Ford Cars use CC5 and 6.

CC1—Tungsten Pointed Bridge, small point, to fit K-W and Ford coils. Used opposite CC2 (4 to a set).

CC2—Tungsten Pointed Spring, small point, to fit K-W and Ford coils. Used opposite CC1 (4 to a set).

CC5—Tungsten Pointed Bridge, large point, to fit K-W and Ford coils. Used opposite CC6 (4 to a set).

CC6—Tungsten Pointed Spring, large point, to fit K-W and Ford coils. Used opposite CC5 (4 to a set).

To Fit Connecticut Distributor

CC13—Fibre Bushing, to fit stud on breaker plate.

CC14—Metal Stud, complete with fibre bushing, washers and cotter pin. This part used to adapt CC15 breaker lever to (riveted type) breaker plates.

CC15—Tungsten Pointed Breaker Lever, to fit all models. Used opposite CC16. If lever is riveted on use in connection with CC14 stud.

CC16—Tungsten Pointed Contact Screw, to fit all models. Used opposite CC15.

CC17—Carbon Distributor Rotor Brush, with spring, to fit CC19 distributor rotor.

CC18—Tension Spring, to fit CC15 breaker lever.

CC19—Distributor Rotor Arm, without brush, to fit Model 15S, four- and six-cylinder. For brush to fit this part see CC17.

CC20—Distributor Rotor Arm, to fit Model 15T, four- and six-cylinder. Used with CC23 and 24 distributor cases.

CC23—Distributor Case, to fit Model 15T, four-cylinder. Used with CC20 distributor rotor.

CC24—Distributor Case, to fit Model 15T, six-cylinder. Used with CC20 distributor rotor.

CC25—Secondary Terminal Nut, to fit CC23 and 24 distributor cases.

CC30—Tension Spring, to fit breaker lever on new style breaker plate assembly.

To Fit Connecticut Distributor

CC21—Distributor Rotor Arm, to fit Models 16 and 16C, four- and six-cylinder. Used with CC26 and 27 distributor cases.

CC26—Distributor Case, to fit Models 16 and 16C, four-cylinder. Used with CC21 distributor rotor.

CC27—Distributor Case, to fit Models 16 and 16C, six-cylinder. Used with CC21 distributor rotor.

CC28—Secondary Metal Slip Terminal Attachment, used to fasten cable in terminals on CC26 and 27 distributor cases.

CC31—Secondary Metal Slip Terminal Attachment, used to fasten cable in terminals on CC36 distributor case.

CC32—Distributor Rotor Arm, to fit Models 17 and 17C, six-cylinder, as used on Lexington car.

CC34—Primary Cable, 10″ long, to fit GA Coil.

CC35—Distributor Rotor Arm, to fit Models 18 and 18C, four- and six-cylinder. Used with CC36 distributor case.

CC36—Distributor Case, to fit Models 18 and 18C, four-cylinder. Used with CC35 distributor rotor.

To Fit Delco Distributor

DD1—Tungsten Pointed Contact Screw Assembly. Used opposite DD2, 5 and 50 contact arm assemblies.

DD2—Tungsten Pointed Contact Arm Assembly. Used opposite DD1 contact screw.

DD5—Tungsten Pointed Contact Arm Assembly, short fibre type. Used opposite DD1 contact screw.

DD11—Tungsten Pointed Contact Screw Assembly. Used opposite DD12 contact arm assembly.

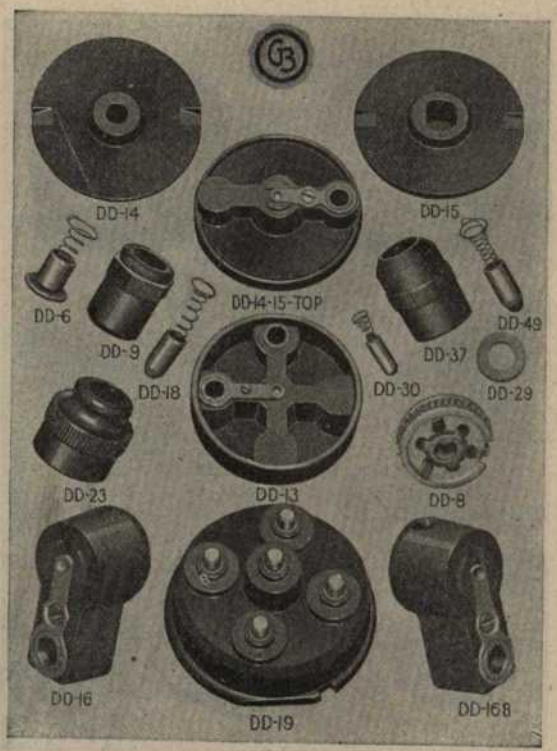
DD12—Tungsten Pointed Contact Arm Assembly, long fibre type. Used opposite DD11 contact screw.

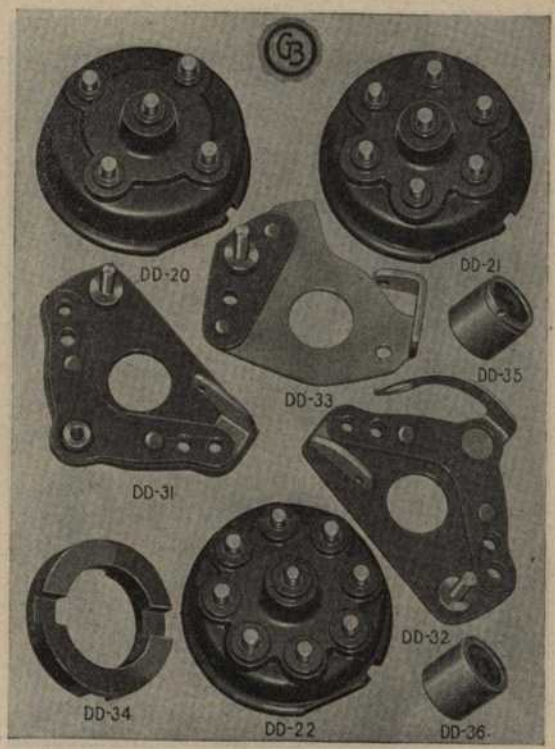
DD27—Tension Spring, flat, to fit contact arm assembly.

DD28—Tension Spring, loop type, to fit contact arm assembly.

For Ignition Replacement Parts Specification Charts, see pages 177-187.

Ignition Replacement Parts—Continued





To Fit Delco Distributor

DD6—Metal Distributor Rotor Brush, with spring, hollow type, to fit DD13, 14, 15, 16 and 16b distributor rotors.

DD8—Resistance Unit Assembly, early type. Six volt.

DD9—High Tension Terminal Nut Assembly, to fit DD20, 21 and 22 distributor head assemblies.

DD13—Distributor Rotor Assembly, without metal brush. For brush to fit this part see DD6.

DD14—Distributor Rotor Assembly, without metal brush (round hole type). For brush to fit this part see DD6.

DD15—Distributor Rotor Assembly, without metal brush (flat side hole type). For brush to fit this part see DD6.

DD16—Distributor Rotor Assembly, without metal brush. For brush to fit this part see DD6.

DD16b—Distributor Rotor Assembly, without metal brush, as used on Packard cars. Same as DD16 with exception of ¼" hole in end.

DD18—Metal Plunger Contact, with spring, to fit DD19, 20, 21, 22, 38, 39, 40, 52, 53 and 55 distributor head assemblies.

DD19—Distributor Head Assembly, complete with metal plunger contact, four-cylinder. Early type. For plunger contact only to fit this part see DD18 or DD49.

DD23—High Tension Terminal Nut Assembly, early type, to fit DD19 distributor head assembly.

DD29—Rubber Insulating Washer, to fit terminals on DD20, 21 and 22 distributor head assemblies.

DD30—Metal Plunger Contact, with spring, to fit early type distributor head assemblies.

DD37—High Tension Terminal Nut Assembly, to fit DD38, 39 and 40 distributor head assemblies.

DD49—Carbon Plunger Contact (metal cased), with spring, to fit DD19, 20, 21, 22, 38, 39, 40, 52, 53 and 55 distributor head assemblies.

To Fit Delco Distributor

DD20—Distributor Head Assembly, complete with metal plunger contact, four-cylinder. For plunger contact to fit this part see DD18 or 49.

DD21—Distributor Head Assembly, complete with metal plunger contact, six-cylinder. For plunger contact to fit this part see DD18 or 49.

DD22—Distributor Head Assembly, complete with metal plunger contact, eight-cylinder. For plunger contact to fit this part see DD18 or 49.

DD31—Contact Arm Bracket Assembly, to fit the following cars:

Buick 1916-17.	Oakland 1916-17.
Cole 1916-17.	Olds 1916-17.
Davis 1916-17-18-19.	Pilot 1917-18-19-20.
Elcar 1916-17.	Paterson 1917-18-19-20.
GMC Truck 1917 to 20.	Premier 1917-18-19-20.
Moon 1916-17-18-19.	Stephens 1917-18-19.
Meteor 1916-17-18-19.	Wescott 1916-17-18-19.

DD32—Contact Arm Bracket Assembly, to fit Dodge 1917-18 and Nash 1917-18.

DD33—Contact Arm Bracket Assembly, to fit Buick 1918-19-20.

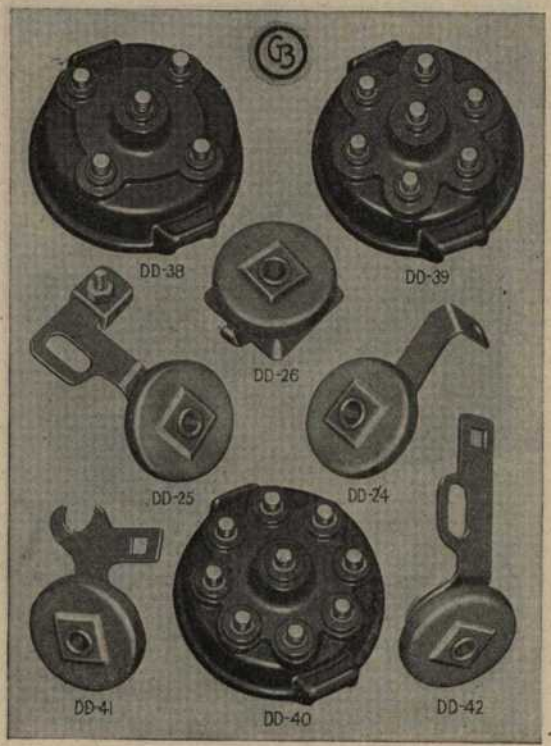
DD34—Metal Float Coupling, pack hardened. Used on Buick cars.

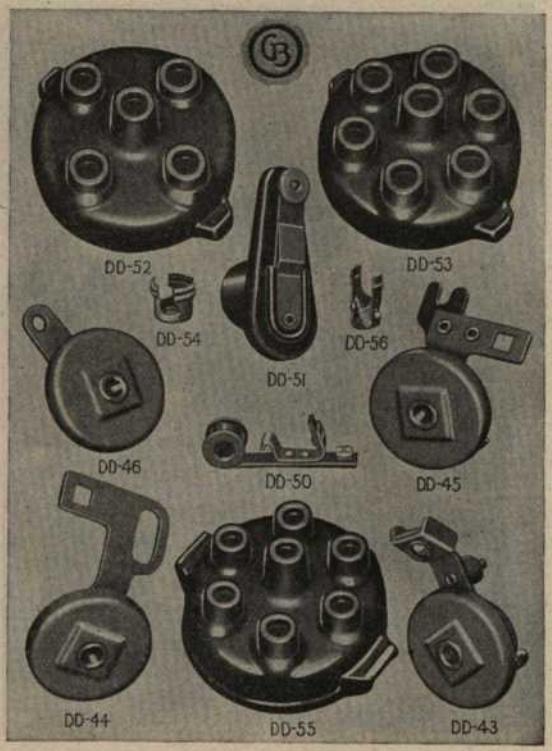
DD35—Bronze Bushing (upper), graphite impregnated, to fit distributor cup assembly.

DD36—Bronze Bushing (lower), graphite impregnated, to fit distributor cup assembly.

For Ignition Replacement Parts Specification Charts, see pages 177-187.

Ignition Replacement Parts—Continued





To Fit Delco Distributor

DD24—Resistance Unit Assembly, with cap and connector bracket. Six volt. Used on numerous cars from 1916 to 1920 inclusive.

DD25—Resistance Unit Assembly, with cap and left-angle connector bracket. Six volt. Used on Cadillac 1917-18-19, Essex 1919, Hudson 1917-18-19 and H. C. S. 1921-22.

DD26—Resistance Unit Assembly, with cap and square base. Six volt. Used on numerous cars from 1918 to 1923 inclusive.

DD38—Distributor Head Assembly, complete with metal plunger contact, four-cylinder. For plunger contact to fit this part see see DD18 or 49.

DD39—Distributor Head Assembly, complete with metal plunger contact, six-cylinder. For plunger contact to fit this part see see DD18 or 49.

DD40—Distributor Head Assembly, complete with metal plunger contact, eight-cylinder. For plunger contact to fit this part see see DD18 or 49.

DD41—Resistance Unit Assembly, with cap and connector bracket. Six volt. Used on Cunningham 1920-21-22, Daniels 1920-21-22, Hudson and Essex 1919 to 1922 inclusive.

DD42—Resistance Unit Assembly, with cap and long arm connector bracket. Six volt. Used on Cadillac 1920-21-22.

DD43—Resistance Unit Assembly, with cap and stud type connector bracket. Six volt. Used on Nash 1917-18 and National 1917-18-19.

To Fit Delco Distributor

DD44—Resistance Unit Assembly, with cap and right-angle connector bracket. Six volt. Used on Marmon 1920-21-22.

DD45—Resistance Unit Assembly, with cap and fibre insulated connector bracket. Six volt. Used on Cole 1920-21-22 and Oldsmobile 1920-21-22.

DD46—Resistance Unit Assembly, with cap and connector bracket. Six volt. Used on Pierce Arrow 1920-21-22.

DD50—Tungsten Pointed Contact Arm Assembly, to fit 1923 Buick cars and other late models. Used opposite DD1.

DD51—Distributor Rotor Assembly, four- and six-cylinder, as used on 1923 Buick cars. Used with DD52 and 53 distributor head assemblies.

DD52—Distributor Head Assembly, complete with carbon plunger contact (metal cased), four-cylinder, as used on Buick-Four 1922-23. For plunger contact to fit this part see DD18 or 49.

DD53—Distributor Head Assembly, complete with carbon plunger contact (metal cased), six-cylinder, as used on Buick-Six 1923. For plunger contact to fit this part see DD18 or 49.

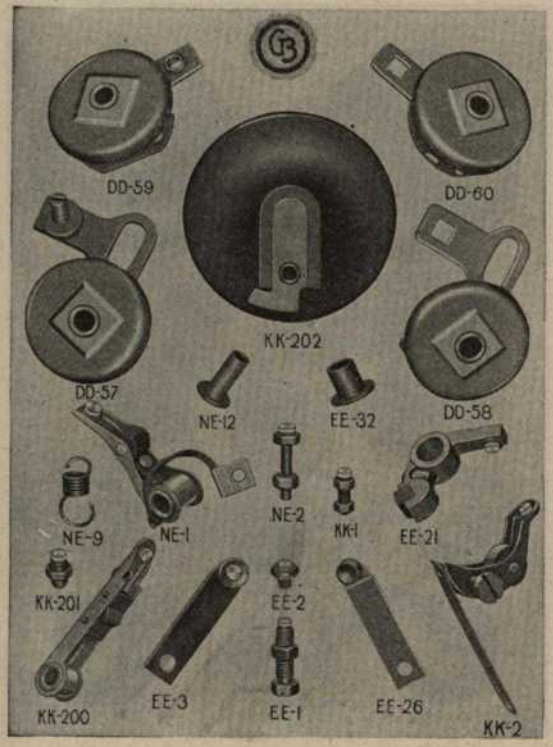
DD54—Secondary Metal Slip Terminal Attachment, used to fasten cable in terminals on DD52 and 53 distributor head assemblies.

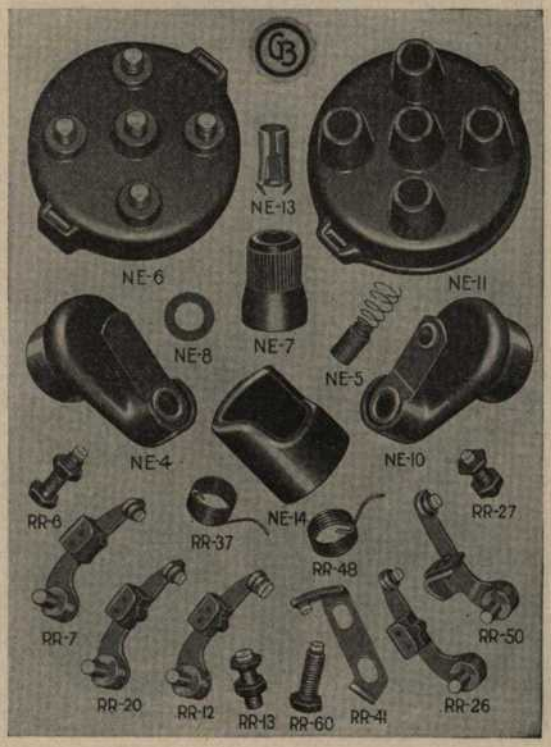
DD55—Distributor Head Assembly, complete with metal plunger contact, six-cylinder, as used on Nash-Six, Packard-Single-Six 1922 models. For plunger contact to fit this part see DD18 or 49.

DD56—Secondary Metal Slip Terminal Attachment, used to fasten cable in terminals on DD55 distributor head assembly.

For Ignition Replacement Parts Specification Charts, see pages 177-187.

Ignition Replacement Parts—Continued





To Fit Delco Distributor

DD57—Resistance Unit Assembly, with cap and threaded stud type connector bracket. Six volt. Used on Packard-Single-Six 1921 and early 22.

DD58—Resistance Unit Assembly, with cap and connector bracket. Six volt. Used on Packard-Single-Six 1922-23.

DD59—Resistance Unit Assembly, with cap and connector bracket. Six volt. Used on Buick-Six 1923.

DD60—Resistance Unit Assembly, with cap and connector bracket. Six volt. Used on Peerless-Eight 1923.

To Fit Eisemann Magneto

EE1—Platinum Pointed Contact Screw, long, to fit all types designated after EE2, 3 and 21. Used opposite EE2, 3 and 21.

EE2—Platinum Pointed Contact Screw, short, to fit breaker lever on Types EA, ED, EM and EU. Used opposite EE1.

EE3—Platinum Pointed Contact Spring, to fit Types G4, GR4, GS4 and GN6 (all first edition). Used opposite EE1.

EE21—Platinum Pointed Breaker Rocker Arm (clock-wise), to fit Types G4, GR4 and GS4 (second edition); GN6 (third edition); M4G6 magneto generator. Used opposite EE1.

EE26—Pressure Spring, with fibre button, to fit back of EE3 contact spring.

EE32—Fibre Insulating Bushing, used with EE21 breaker arm.

To Fit Kingston Distributor

KK200—Tungsten Pointed Contact Breaker Arm, as used on Haynes cars 1920-21 only. Used opposite KK201.

KK201—Tungsten Pointed Contact Screw, as used on Haynes cars 1920-21 only. Used opposite KK200.

KK202—Distributor Disc Assembly, six-cylinder, as used on Haynes cars 1920 to 23.

To Fit K-W Magneto

KK1—Platinum Pointed Contact Screw, to fit all models. Used opposite KK2.

KK2—Platinum Pointed Circuit Breaker Arm, to fit all models except RK. Used opposite KK1.

To Fit North East Distributor

NE1—Tungsten Pointed Breaker Arm, complete with pigtail, to fit all models. Used opposite NE2.

NE2—Tungsten Pointed Contact Screw, to fit all models. Used opposite NE1.

NE9—Tension Coil Spring, to fit NE1 breaker arm.

NE12—Fibre Insulating Bushing, used with NE1 breaker arm.

To Fit North East Distributor

NE4—Distributor Rotor, without carbon brush, four-cylinder, as used on early North East equipped Dodge cars. Used with NE6 distributor cover. For brush to fit this part see NE5.

NE5—Carbon Distributor Rotor Brush, with spring, to fit NE4 and 10 distributor rotors.

NE6—Distributor Cover, screw terminal type, four-cylinder, as used on early North East equipped Dodge cars. Used with NE4 distributor rotor.

NE7—High Tension Terminal Nut, to fit NE6 distributor cover.

NE8—Rubber Insulating Washer, to fit terminals on NE6 distributor cover.

NE10—Distributor Rotor, without carbon brush, four-cylinder, to fit all North East equipped cars except early Dodge. Used with NE11 distributor cover. For brush to fit this part see NE5.

NE11—Distributor Cover, plug terminal type, four-cylinder, as used on all Dodge cars except early models using NE6. Used with NE10 distributor rotor.

NE13—Secondary Slip Terminal Attachment, used to fasten cable in terminals on NE11 distributor cover.

To Fit North East Starter-Generator

NE14—Starter Terminal Insulator (Bakelite), used on Model G Starter-Generators on Dodge cars.

To Fit Remy Distributor

RR6—Platinum Pointed Adjusting Screw, to fit ignition distributor. Used opposite RR7 and 20 only.

RR7—Platinum Pointed Circuit Breaker Lever, with concave fibre block, to fit ignition distributor, early type. Used opposite RR6 only.

RR12—Tungsten Pointed Circuit Breaker Lever, large point, to fit ignition distributor. Used opposite RR13 only.

RR13—Tungsten Pointed Adjusting Screw, large point, to fit ignition distributor. Used opposite RR12 only.

RR20—Platinum Pointed Circuit Breaker Lever, with raised fibre block, to fit ignition distributor. Used opposite RR6 only.

RR26—Tungsten Pointed Circuit Breaker Lever, small point, to fit ignition distributor. Used opposite RR27, 41 and 60.

RR27—Tungsten Pointed Adjusting Screw, small point, to fit ignition distributor. Used opposite RR26, 49 and 50.

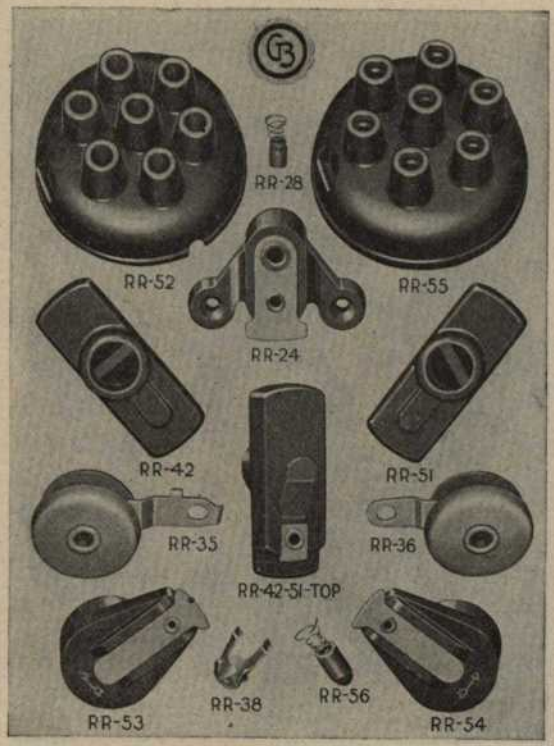
RR37—Tension Coil Spring (light type), to fit RR7, 12, 20, 26, 49 and 50 breaker levers.

RR41—Tungsten Pointed Stationary Contact, to fit 606 series ignition distributors. Used opposite RR26 and 50.

Note: For platinum pointed contacts on all Remy Distributors after 1916 use RR6 and RR20.

For Ignition Replacement Parts Specification Charts, see pages 177-187.

Ignition Replacement Parts—Continued



To Fit Remy Distributor

***RR48—Tension Coil Spring** (heavy type), to fit RR7, 12, 20, 26, 49 and 50 breaker levers.

***RR49—Tungsten Pointed Circuit Breaker Lever,** small point, to fit Model 606B and D ignition distributors only. Flat fibre type. Same as RR50 with exception of angle on fibre. Used opposite RR27 and 60. (See cut RR50.)

***RR50—Tungsten Pointed Circuit Breaker Lever,** small point, to fit ignition distributor. Flat fibre type. Interchangeable with RR26. Used opposite RR27, 41 and 60.

***RR60—Tungsten Pointed Adjusting Screw,** small point, to fit ignition distributor. Interchangeable with RR27. Used opposite RR26, 49 and 50.

RR21—Distributor Segment Assembly, to fit four-cylinder. (Metal rotor blade, is reversible for either right or left rotation). Used with RR30 distributor cap assembly.

RR22—Distributor Segment Assembly, to fit six-cylinder. (Metal rotor blade, is reversible for either right or left rotation). Used with RR31 distributor cap assembly.

RR23—Distributor Segment Assembly, to fit eight-cylinder. (Metal rotor blade, is reversible for either right or left rotation).

RR29—NOTE—A, B, E and F all constructed the same with the exception of timing pin hole. (See car guide before ordering).

RR29a—Distributor Segment Assembly, to fit four-cylinder tangential cam, clockwise. Used with RR33 distributor cap assembly.

RR29b—Distributor Segment Assembly, to fit four-cylinder standard cam or six-cylinder standard and tangential cams, clockwise. Used with RR33 and 34 distributor cap assemblies.

RR29e—Distributor Segment Assembly, to fit four-cylinder standard cam or six-cylinder standard and tangential cams, counter-clockwise. Used with RR33 and 34 distributor cap assemblies.

RR29f—Distributor Segment Assembly, to fit four-cylinder tangential cam, counter-clockwise. Used with RR33 distributor cap assembly.

RR30—Distributor Cap Assembly, screw terminal type, four-cylinder. For rotor to fit this part see RR21.

RR31—Distributor Cap Assembly, screw terminal type, six-cylinder. For rotor to fit this part see RR22.

RR32—High Tension Terminal Nut Assembly, brass, to fit RR30 and 31 distributor cap assemblies.

***For illustration see preceding cut.**

To Fit Remy Distributor

RR24—Distributor Brush Holder, to fit Studebaker 1914-15 and Reo 1915. For brush to fit this part see RR28.

RR28—Carbon Distributor Brush, with spring, to fit RR24 distributor brush holder.

RR33—Distributor Cap Assembly, plug terminal type, four-cylinder. For rotors to fit this part see RR29a or 29f.

RR34—Distributor Cap Assembly, plug terminal type, six-cylinder. For rotors to fit this part see RR29b or 29e.

RR35—Resistance Unit Assembly, with cap and long arm connector bracket. Six volt.

RR36—Resistance Unit Assembly, with cap and short arm connector bracket. Six volt.

RR38—Secondary Metal Slip Terminal Attachment, used to fasten cable in terminals on RR33, 34, 52 and 55 distributor cap assemblies.

RR42—Distributor Segment Assembly, six-cylinder, to fit 606A ignition distributor, counter-clockwise, as used on Studebaker-Light-Six 1920-21-22. Used with RR52 distributor cap assembly.

RR51—Distributor Segment Assembly, six-cylinder, to fit 606B, D and E ignition distributors, clockwise, as used on Oakland and Kissel 1922 models. Used with RR52 distributor cap assembly.

RR52—Distributor Cap Assembly, plug terminal type, six-cylinder, to fit 606A, B, D and E ignition distributors, as used on Studebaker-Light-Six 1920-21-22, Oakland 1922 and Kissel 1922. For rotors to fit this part see RR42 and 51.

RR53—Distributor Segment Assembly, six-cylinder, to fit 626B, D and E ignition distributors, clockwise, as used on Elgin, Kissel and Oakland, late 1922 and 1923 models. Used with RR55 distributor cap assembly.

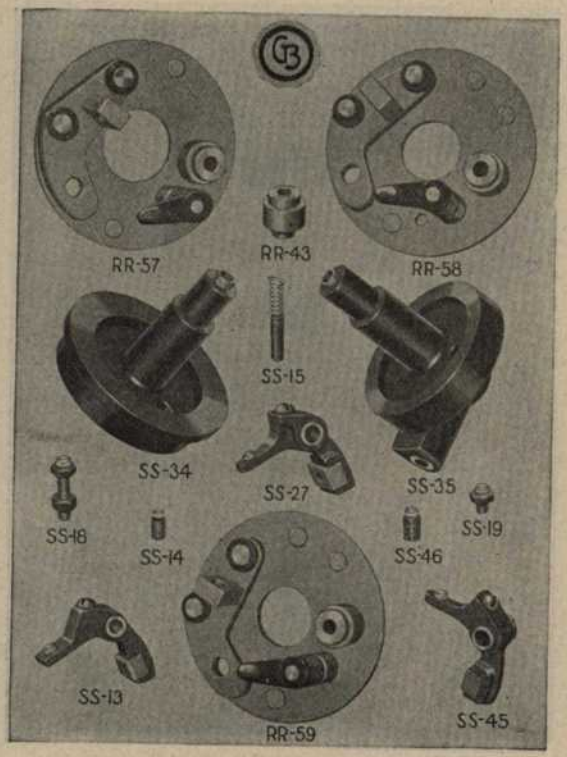
RR54—Distributor Segment Assembly, six-cylinder, to fit 626A ignition distributor, counter-clockwise, as used on Studebaker-Light-Six, late 1922 and 1923. Used with RR55 distributor cap assembly.

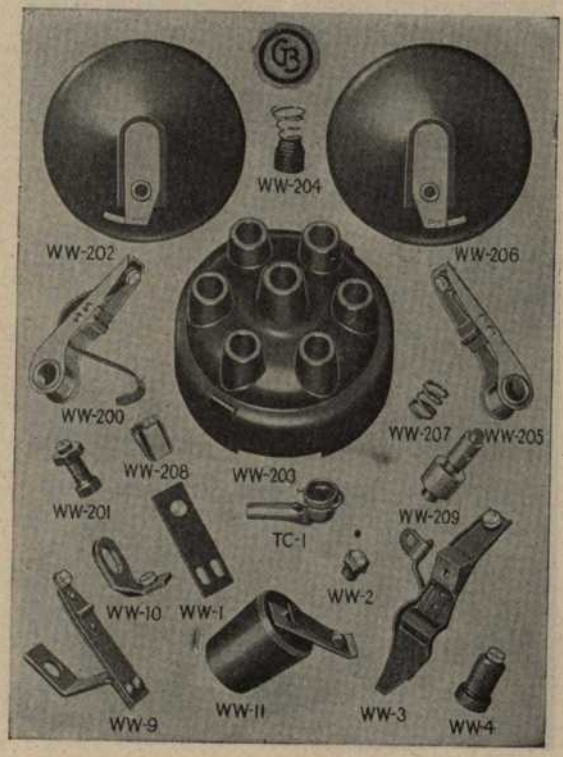
RR55—Distributor Cap Assembly, plug terminal type, six-cylinder. Complete with carbon plunger contact (metal cased), to fit 626A, B, D and E ignition distributors, as used on Elgin, Kissel, Oakland and Studebaker-Light-Six, late 1922 and 1923 models. For plunger contact to fit this part see RR56. For rotors to fit this part see RR53 and 54.

RR56—Carbon Plunger Contact (metal cased), with spring, to fit RR55 distributor cap assembly.

For Ignition Replacement Parts Specification Charts, see pages 177-187.

Ignition Replacement Parts—Continued





To Fit Remy Distributor

RR43—Bronze Bushing, to fit RR57, 58 and 59 circuit breaker bases. Adaptable to stud on all circuit breaker levers.

RR57—Circuit Breaker Base (grounded), without contacts and tension spring, to fit the following cars:

Chevrolet 1917 to 22.
Jackson 1917 8-Cyl., 1919-20 6-Cyl.
Olds Truck 1921 4-Cyl.
Overland 1917 4- and 6-Cyl., 1920 4-Cyl.
Willys 1917 8-Cyl.

RR58—Circuit Breaker Base (grounded), without contacts and tension spring, to fit the following cars:

Auburn 1917 to 22 6-Cyl.
Anderson 1920-21 6-Cyl.
Chevrolet 1922 4-Cyl.
Com. Truck 1917-18-19.
Chalmers 1917 to 22.
Kissel 1917 to 21 6-Cyl
McLaughlin 1917 to 21.
Mitchell 1917 to 22 6-Cyl.
Oakland 1917 to 22.
Olds 1917 to 22.
Paige 1918 6-Cyl.
Scripps-Booth '18 to 22 6-Cl.
Service Truck 1921-22.
Samson Tractor 1918.

RR59—Circuit Breaker Base (grounded), without contacts and tension spring, to fit the following cars:

Auburn 1916 4- and 6-Cyl., 1917 6-Cyl.
Apperson 1915-16 4-Cyl., 1918-19 8-Cyl.
Chalmers 1916 6-Cyl.
Haynes 1915 6-Cyl.
Interstate Truck 1916-17 4-Cyl.
Jackson 1917 8-Cyl.
Kissel Truck 1921.
Paige 1915 6-Cyl.
Studebaker 1916-17-18 4- and 6-Cyl.

To Fit Simms Magneto

SS18—Platinum Pointed Contact Screw, long, to fit all types. Used opposite SS19.

SS19—Platinum Pointed Contact Screw, short, to fit all types. Used opposite SS18.

To Fit Splitdorf Magneto

Dixie Models

SS13—Platinum Pointed Breaker Bar, to fit various Dixie Models. Used opposite SS14.

SS14—Platinum Pointed Contact Screw, to fit various Dixie Models. Used opposite SS13 and 27.

SS15—Carbon Distributor Brush, with spring, to fit SS34 and 35 distributor finger rotors.

SS20—Platinum Pointed Breaker Bar, to fit Dixie Model 441 only. Used opposite SS21. (See cut SS45.)

SS21—Platinum Pointed Contact Screw, to fit Dixie Model 441 only. Used opposite SS20. (See cut SS46.)

SS27—Platinum Pointed Breaker Bar, to fit various Dixie Models. Used opposite SS14.

SS34—Distributor Disc, without carbon brush, to fit Dixie four-cylinder. For brush to fit this part see SS15.

SS35—Distributor Finger, without carbon brushes, to fit Dixie six-cylinder. For brushes to fit this part see SS15.

To Fit Splitdorf Magneto

Aero Models

SS45—Platinum Pointed Breaker Bar, to fit Aero Models. Used opposite SS46.

SS46—Platinum Pointed Contact Screw, to fit Aero Models. Used oppositee SS45.

To Fit Wagner Distributor

WW200—Tungsten Pointed Breaker Lever, complete with tension spring, to fit all models except those designated after WW205. Used opposite WW201.

WW201—Tungsten Pointed Contact Screw, to fit all models. Used opposite WW200 and 205.

WW202—Revolving Distributor Disc Assembly, clockwise, four- and six-cylinder, as used on Nash cars.

WW203—Distributor Cover, complete with carbon plunger contact, to fit all six-cylinder cars. For plunger contact to fit this part see WW204. Used with WW202 and 206 distributor discs.

WW204—Carbon Plunger Contact, with spring, to fit WW203 distributor cover.

WW205—Tungsten Pointed Breaker Lever, same as WW200 except us s separate tension spring WW207, as used on early Wagner equipped Studebaker cars. Used opposite WW201.

WW206—Revolving Distributor Disc Assembly, counter-clockwise, six-cylinder, as used on Studebaker cars.

WW20 —Tension Coil Spring, used with WW205 lever.

WW208—Secondary Met l Slip Terminal Attachment, used to fasten cable in terminals on WW203 cover.

WW209—Metal Breaker Lever Stud, complete with lubricating wick, to fit all Wagner breaker plates. Adaptable to WW200 and 205 breaker levers.

To Fit Westinghouse Distributor

Early Type

WW1—Platinum Pointed Contact Spring, to fit horizontal type. Used opposite WW2.

WW2—Platinum Pointed Contact Screw, to fit horizontal type. Used opposite WW1.

WW3—Platinum Pointed Interrupter Contact Arm, to fit vertical type. Used opposite WW4.

WW4—Platinum Pointed Interrupter Contact Screw, to fit vertical type. Used opposite WW3.

Late Type

WW9—Tungsten Pointed Interrupter Contact Arm, as used on Gardner car. Used opposite WW10.

WW10—Tungsten Pointed Stationary Contact, as used on Gardner car. Used opposite WW9.

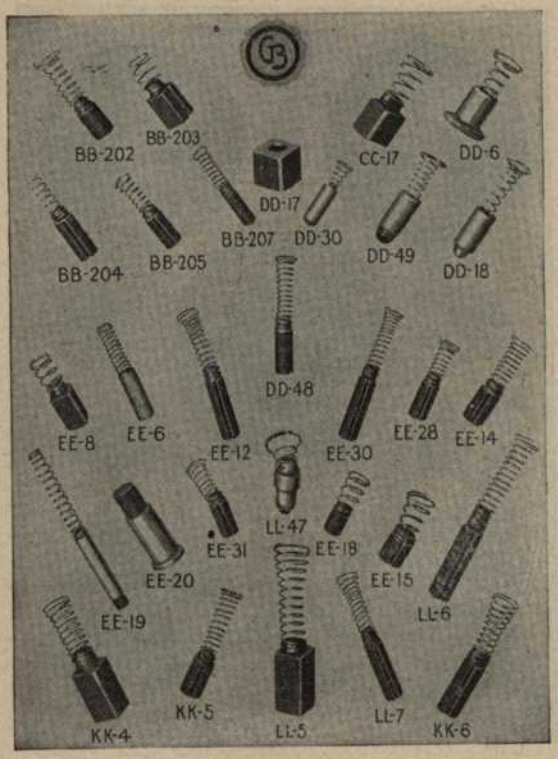
WW11—Distributor Rotor Assembly, as used on Gardner.

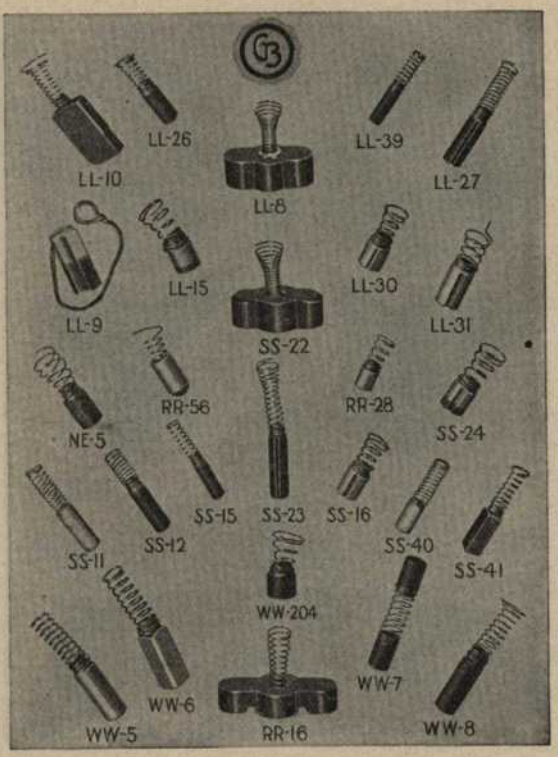
Miscellaneous

TC1—Spark Plug Terminal Clip, used to fasten spark plug cable to spark plugs on all Buick cars.

For Ignition Replacement Parts Specification Charts, see pages 177-187.

Magneto and Distributor Brushes





Magneto and Distributor Brushes

Including Springs

To Fit Berling Magneto

BB202—Carbon Interrupter Ground Brush, to fit all types.
BB203—Carbon Distributor Finger Brush, to fit D and DD.
BB204—Carbon Distributor Finger Contact Brush, to fit Types D and DD.
BB205—Carbon Collector Brush, to fit Types D, DD, N44, B11 and 21.
BB207—Carbon Collector Brush, to fit all types except those designated after BB205.

To Fit Bosch Magneto

LL5—Carbon Distributor Brush, to fit Models D and DR.
LL6—Carbon Collector Brush, to fit D, DR, DU and ZR.
LL7—Carbon Distributor Brush, to fit Models DU1 and 2. Also used as collector brush.
LL8—Carbon Distributor Brush, to fit DU3, 4, 6 and ZR.
LL9—Carbon Ground Brush, to fit Models D, DU, DR and ZR new style.
LL10—Carbon Distributor Brush, to fit Model ZR old style.
LL15—Carbon Ground Brush, to fit all models.
LL26—Carbon Collector Brush, to fit Models NU4, ZE2 and ZEV.
LL27—Carbon Collector Brush, to fit Model ZE1.
LL30—Metal Ground Brush, to fit Model ZR old style.
LL31—Metal Ground Brush, to fit Model ZR old style.
LL39—Carbon Collector Brush, to fit Model BA1.

To Fit Bosch Magneto (B4-B6) and Distributor

LL47—Carbon Plunger Contact (metal cased), to fit LL42, 43, 55 and 56 distributor covers.

To Fit Connecticut Distributor

CC17—Carbon Distributor Rotor Brush, to fit CC19 rotor.

To Fit Delco Distributor

DD6—Metal Distributor Rotor Brush, to fit DD13, 14, 15, 16 and 16b distributor rotors.
DD17—Carbon Distributor Rotor Brush, to fit early type.
DD18—Metal Plunger Contact, to fit DD19, 20, 21, 22, 38, 39, 40, 52, 53 and 55 distributor covers.
DD30—Metal Plunger Contact, to fit early type distributor covers.
DD48—Carbon Distributor Rotor Brush, to fit rotors on Lincoln and Wills St. Claire cars.
DD49—Carbon Plunger Contact (metal cased), to fit all distributor covers designated after DD18.

To Fit Eisemann Magneto

EE6—Gauze Short Circuiting Brush, to fit early types.
EE8—Carbon Distributor Brush, to fit early types.
EE12—Carbon Collector Brush, to fit early and late types.
EE14—Carbon Distributor Brush, to fit early and late types.
EE15—Carbon Ground Brush, for breakers, to fit all types.
EE18—Carbon Ground Brush (in brass shell), early types.
EE19—Carbon Conductor Brush (in brass shell), to fit early type.
EE20—Carbon Ground Brush (in brass shell), early types.
EE28—Carbon Distributor Brush, to fit late types.
EE30—Carbon Collector Brush, to fit early types.
EE31—Carbon Collector Brush, to fit early types.

To Fit K-W Magneto

KK4—Carbon Distributor Brush, to fit Model HK.
KK5—Carbon Distributor Brush, to fit Model T.
KK6—Carbon Distributor Cap Plunger Brush, Model HK.

To Fit North East Distributor

NE5—Carbon Distributor Rotor Brush, to fit NE4 and 10 distributor rotors.

To Fit Remy Distributor

RR16—Carbon Distributor Brush, to fit early type.
RR28—Carbon Distributor Brush, to fit RR24 distributor brush holder.
RR56—Carbon Plunger Contact (metal cased), to fit RR55 distributor cover.

To Fit Simms Magneto

SS22—Carbon Distributor Brush, to fit all types.
SS23—Carbon Collector Brush, to fit all types.
SS24—Metal Graphite Brush, to fit breakers on all types.

To Fit Splitdorf and Dixie Magnetos

SS11—Gauze Brush, to fit low tension models.
SS12—Carbon Distributor Brush, to fit low tension models.
SS15—Carbon Distributor Brush, to fit Dixie and late models.
SS16—Metal Collector Brush, to fit low tension models.
SS40—Gauze Ground Brush, to fit low tension models.
SS41—Carbon Distributor Finger Brush, to fit late models.

To Fit Westinghouse Distributor

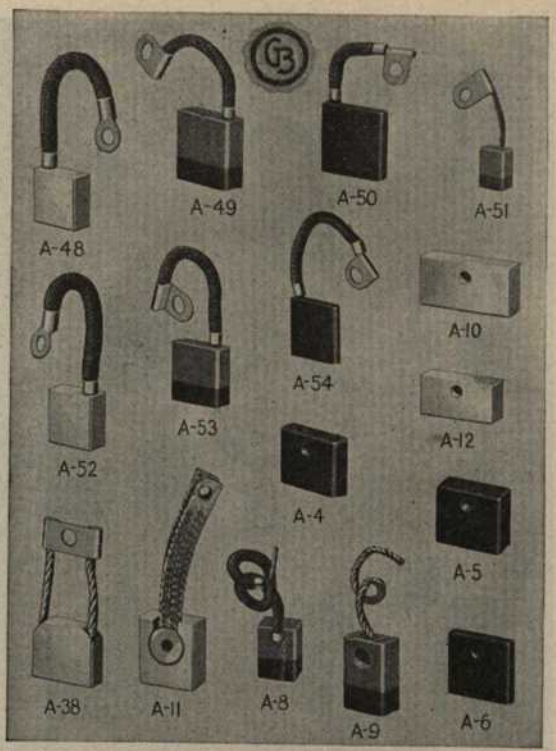
WW5—Metal Conductor Brush, to fit horizontal type.
WW6—Metal Distributor Brush, to fit horizontal type.
WW7—Carbon Distributor Rotor Brush, to fit vertical type.
WW8—Carbon Conductor Brush, to fit horizontal type.

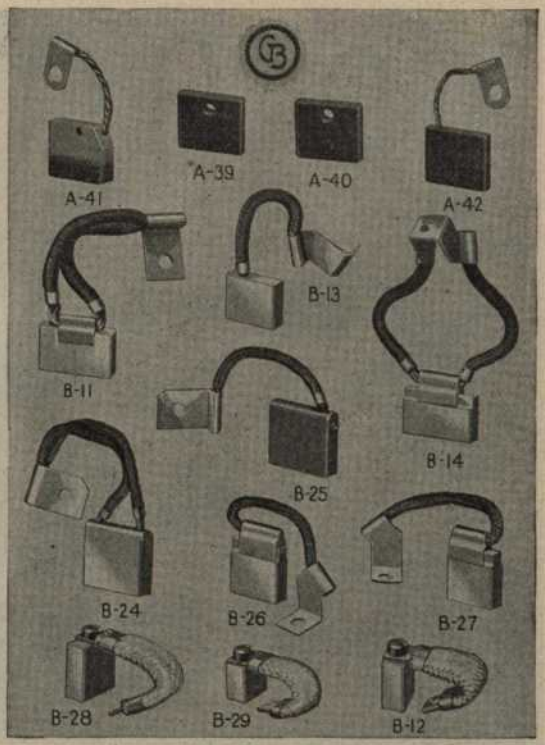
To Fit Wagner Distributor

WW204—Carbon Plunger Contact, to fit WW203 cover.

For Ignition Replacement Parts Specification Charts, see pages 177-187.

Starter and Generator Brushes





To Fit A. B. C. Generator

A51—Metal-Graphite. 1/2"x3/8"x1/4". Main and control. Two used.

To Fit Atwater Kent Starter

A48—Metal. 11/16"x11/16"x5/16". Four used.

A52—Metal. 11/16"x11/16"x5/16". Four used.

To Fit Atwater Kent Generator

A49—Graphite. with A50. 7/8"x7/8"x5/16". Main. Two used

A50—Graphite. with A49. 7/8"x7/8"x5/32". Control. One used

A53—Graphite. with A54. 3/4"x3/4"x9/32". Main. Two used

A54—Graphite. with A53. 3/4"x3/4"x1/8". Control. One used

To Fit Auto-Lite Starter

(also known as Electric Auto-Lite)

A10—Metal. 5/8"x1-1/4"x5/16". Four used.

A11—Metal. 7/8"x3/4"x3/8". Two used.

A12—Metal. 1/2"x1"x5/16". Four used.

A38—Metal. 3/4"x7/8"x9/32". Four used.

To Fit Auto-Lite Generator

(also known as Electric Auto-Lite)

A4—Graphite. with A6. 3/4"x7/8"x9/32". Main. Two used

A5—Graphite. 3/4"x7/8"x3/8". Main and control. Two used.

A6—Graphite. Two used. 13/16"x7/8"x3/16". Main and control.

A8—Graphite. Two used. 11/16"x1/2"x3/8". Main and control.

A9—Graphite. Two used. 15/16"x5/8"x3/8". Main and control.

To Fit Auto-Lite Generator

(also known as Electric Auto-Lite)

A39—Same as A6, except has longer bevel. Control. One used.

A40—Same as A6, except has concave end. Control. One used.

A41—Graphite. with A42. 3/4"x7/8"x9/32". Main. Two used

A42—Graphite. with A41. 3/4"x7/8"x3/16". Control. One used

To Fit Bijur Starter

B11—Metal. 5/8"x1"x1/4". Four used.

B12—Metal. 3/4"x1/2"x5/16". Four used.

B13—Metal. 5/8"x3/4"x1/4". Four used.

B14—Metal. 5/8"x1"x1/4". Four used.

B24—Metal. 7/8"x1"x1/4". Four used.

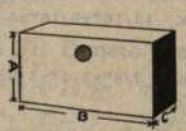
B25—Metal-Graphite. 7/8"x1"x1/4". One used.

B26—Metal. 3/4"x3/4"x1/4". Right angle terminal. Two used with B27.

B27—Metal. 3/4"x3/4"x1/4". Left angle terminal. Two used with B26.

B28—Metal. 3/4"x3/4"x5/16". Four used.

B29—Metal. 1/2"x1/2"x5/16". Four used.



Proper Method for Measuring Brush

A–is first dimension.

B–is second dimension.

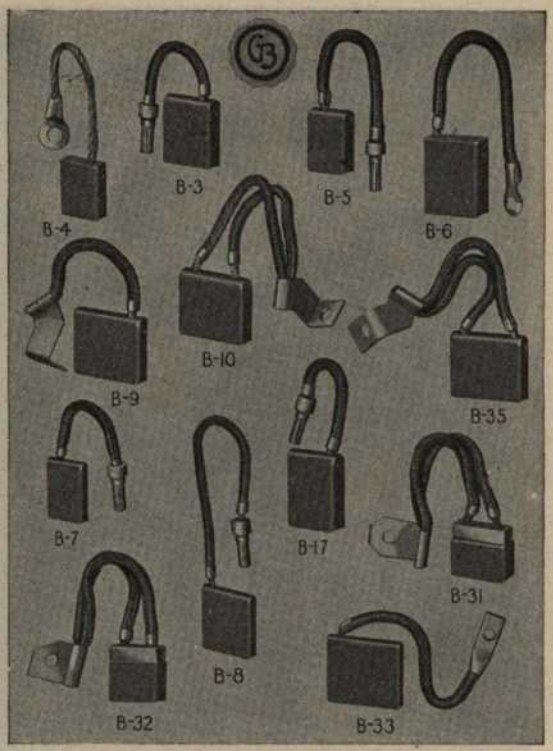
C–is third dimension.

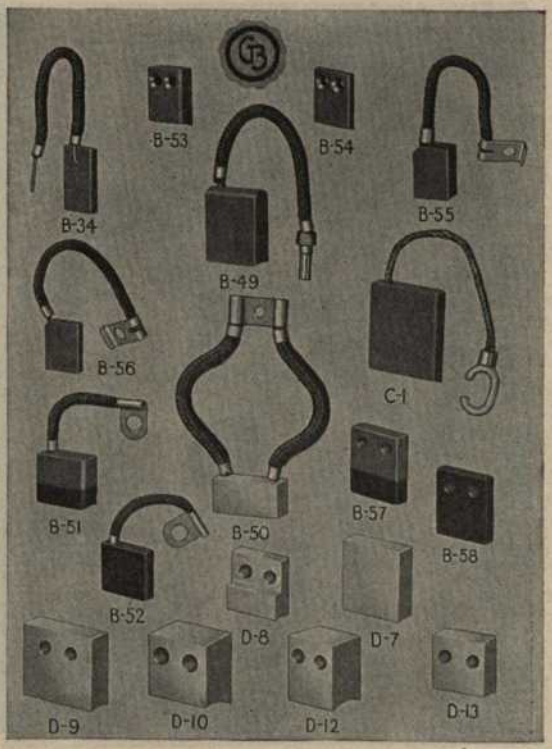
For example see A10.

A–is 5/8"—B–is 1-1/4"—C–is 5/16".

For Ignition Replacement Parts Specification Charts, see page 177-187.

Starter and Generator Brushes—Continued





To Fit Bijur Motor-Generato.

B9—Metal-Graphite. 7/8"x1"x1/4". Main and control. Two used.

B10—Metal-Graphite. 7/8"x1"x1/4". Right angle terminal. Main. Two used with B35.

B35—Metal-Graphite. 7/8"x1"x1/4". Left angle terminal. Main. Two used with B10.

To Fit Bijur Generator

B3—Metal-Graphite. 7/8"x3/4"x9/32". Main and control. Two used.

B4—Metal-Graphite. 3/4"x9/16"x1/4". Main and control. Two used.

B5—Metal-Graphite. 13/16"x9/16"x9/32". Main. Two used with B7.

B6—Metal-Graphite. 1"x3/4"x3/8". Main and control. Two used.

B7—Metal-Graphite. 13/16"x9/16"x5/32". Control. One used with B5.

B8—Metal-Graphite. 7/8"x3/4"x5/32". Control. One used with B17.

B17—Metal-Graphite. 1"x3/4"x9/32". Main. Two used with B8.

B31—Metal-Graphite. 11/16"x3/4"x5/16". Main. Two used with B32.

B32—Metal-Graphite. 11/16"x3/4"x1/4". Control. One used with B31.

B33—Metal-Graphite. 7/8"x1"x5/32". Control. One used.

To Fit Bijur Generator

B34—Metal-Graphite. 7/8"x1/2"x5/32". Control. One used.

B49—Metal-Graphite. 1"x3/4"x3/8". Main. Two used.

B53—Metal-Graphite. 3/4"x9/16"x9/32". Main. Two used with B54.

B54—Metal-Graphite. 3/4"x9/16"x5/32". Control. One used with B53.

B55—Metal-Graphite. 11/16"x1/2"x5/16". Main. Two used with B56.

B56—Metal-Graphite. 11/16"x1/2"x5/32". Control. One used with B55.

To Fit American-Bosch Starter

B50—Metal. 1/2"x15/16"x11/32". Four used.

To Fit American-Bosch Generator

B51—Graphite. 3/4"x3/4"x3/8". Main. Two used.

B52—Graphite. 3/4"x3/4"x3/16". Control. One used with B51.

B57—Graphite. 15/16"x3/4"x1/4". Main. Two used with B58.

B58—Graphite. 15/16"x3/4"x3/16". Control. One used with B57.

To Fit Chalmers-Entz Motor-Generator

C1—Metal-Graphite. 1-1/4"x1"x1/4". Four used.

To Fit Delco Starter

D7—Metal. 1"x7/8"x5/16". Two used.

D8—Metal. 13/16"x3/4"x3/8". As used on Buick. One used with D14.

D9—Metal. 1"x1-1/8"x3/8". Two used.

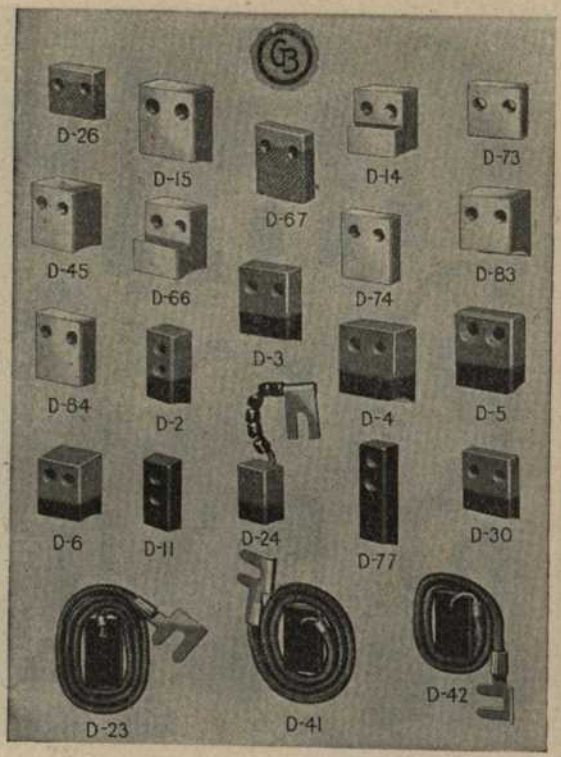
D10—Metal. 1"x7/8"x11/16". Two used.

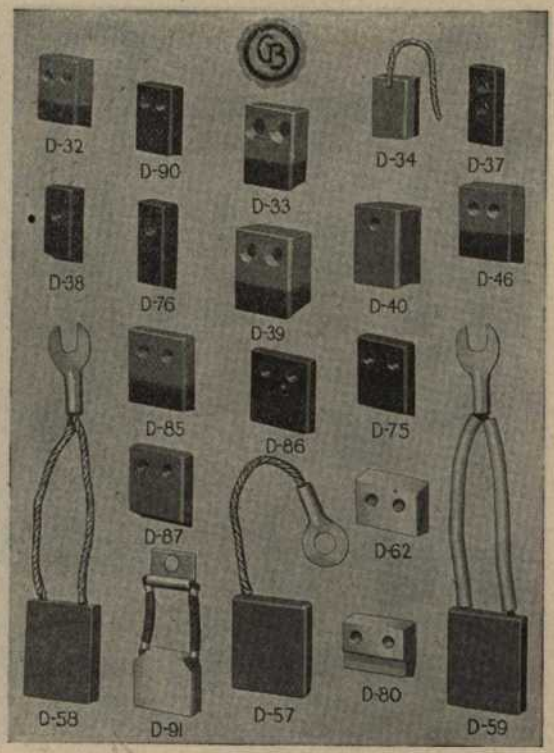
D12—Metal. 7/8"x3/4"x5/8". As used on Cadillac. Two used.

D13—Metal. 13/16"x3/4"x3/8". Upper. One used.

For Ignition Replacement Parts Specification Charts, see pages 177-187.

Starter and Generator Brushes—Continued





To Fit Delco Starter

D14—Metal. 13/16"x3/4"x9/16". As used on Buick. One used with D8.

D15—Metal. 1"x7/8"x7/16". Two used.

D26—Bronze Gauze. 11/16"x3/4"x1/4". For this brush in metal see D73. Four used.

D45—Metal. 13/16"x3/4"x9/16". Two used.

D66—Metal. 7/8"x3/4"x5/8". Two used.

D67—Bronze Gauze. 7/8"x3/4"x1/4". For this brush in metal see D74. Four used.

D73—Metal. 11/16"x3/4"x1/4". Same as D26 except made of metal. Four used.

D74—Metal. 7/8"x3/4"x1/4". Same as D67 except made of metal. Four used.

D83—Metal. 1"x3/4"x5/8". As used on Buick 1922-23 four-cyl. One used with D12.

D84—Metal. 7/8"x13/16"x5/16". Four used.

To Fit Delco Generator

D2—Metal-Graphite. 1"x1/2"x3/8". Main. Two used.

D3—Metal-Graphite. 1"x3/4"x3/8". Main. Two used.

D4—Graphite. 1"x7/8"x1/2". Main. Two used.

D5—Graphite. 1"x7/8"x3/8". Main. Two used.

D6—Metal-Graphite. 7/8"x5/8"x5/8". Main. Two used.

D11—Metal-Graphite. 1"x7/16"x5/16". Control. For this brush except 3/8" longer see D77. One used.

D23—Graphite. 7/8"x1/2"x3/16". Control. Pigtail 12-1/2" long. One used.

D24—Graphite. 3/4"x1/2"x3/8". Main. Two used.

D30—Graphite. 7/8"x3/4"x1/4". Main. Two used.

D41—Graphite. 7/8"x1/2"x3/16". Control. Pigtail 11" long. One used.

D42—Graphite. 7/8"x1/2"x3/16". Control. Pigtail 8-1/2" long. One used.

D77—Metal-Graphite. 1-3/8"x7/16"x5/16". Control. Same as D11 except 3/8" longer. One used.

To Fit Delco Generator

D32—Metal-Graphite. 7/8"x5/8"x3/8". Main. Two used.

D33—Graphite. 1"x3/4"x3/8". Main. Same as D3 except holes counter-sunk. Two used.

D34—Graphite. 3/4"x3/4"x1/2". Main. Two used.

D37—Metal-Graphite. 1"x7/16"x3/16". Control. One used.

D38—Metal-Graphite. 1"x7/16"x5/16". Control. For this brush except 1/8" longer see D76. One used.

D39—Graphite. 1"x7/8"x1/2". Main. Same as D4 except holes counter-sunk. Two used.

D40—Metal-Graphite. 1"x3/4"x1/2". Main. Two used.

D46—Graphite. 1"x3/4"x3/8". Main. Same as D3 except hopes .281" center to center. Two used.

D75—Metal-Graphite. 1"x3/4"x1/4". Control. One used.

D76—Metal-Graphite. 1-1/8"x7/16"x5/16". Control. Same as D38 except 1/8" longer. One used.

D85—Graphite. 1"x7/8"x1/4". Main and control. Two or three used.

D86—Graphite. 1"x7/8"x3/16". Control. One used.

D87—Metal-Graphite. 1"x7/8"x1/4". Main and control. Two or three used.

D90—Metal-Graphite. 7/8"x5/8"x1/4". Control. One used with D32.

To Fit Dyneto Starter

D62—Metal. 3/4"x7/8"x3/8". Two used.

D80—Metal. 3/4"x7/8"x3/8". Same as D62 except two sides shouldered and curved. Two used.

D91—Metal. 13/16"x3/4"x1/4". Four used.

To Fit Dyneto Motor-Generator

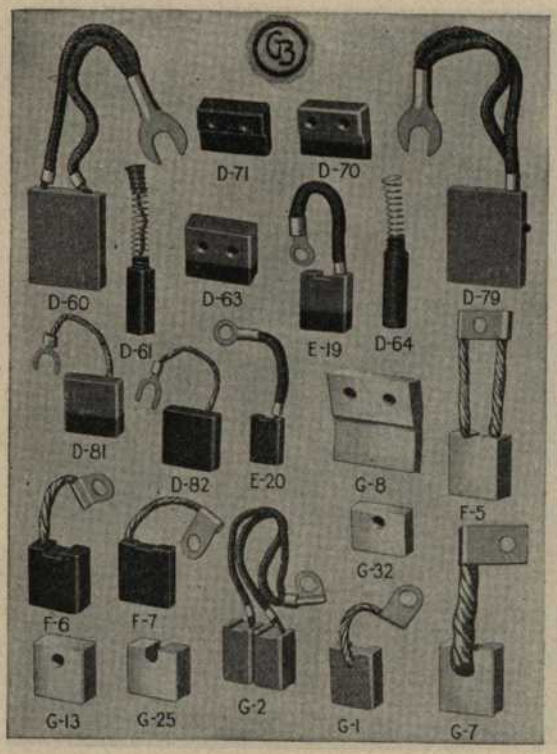
D57—Metal-Graphite. 1-1/4"x1"x1/4". Four used.

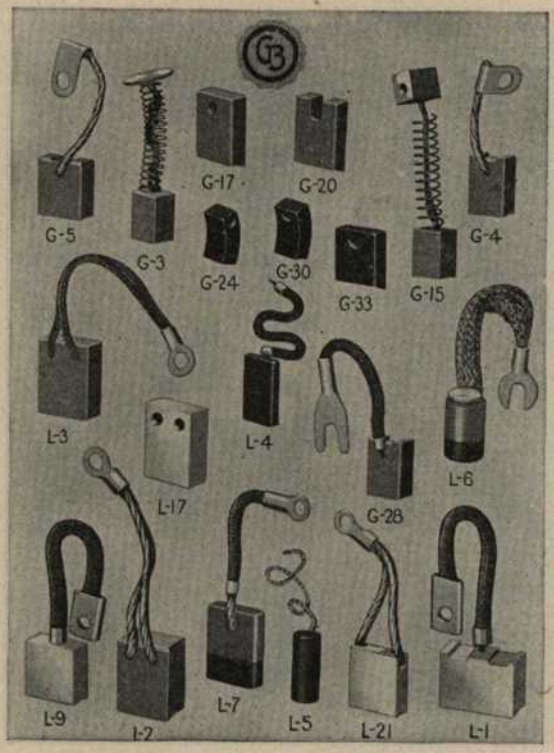
D58—Metal-Graphite. 1-1/4"x1"x1/4". Four used.

D59—Metal-Graphite. 1-1/4"x1"x1/4". Four used.

For Ignition Replacement Parts Specification Charts, see pages 177-187.

Starter and Generator Brushes—Continued





To Fit Dyneto Motor-Generator

D60—Metal-Graphite. 1-1/4"x1"x1/4". Main. Two used with D61.
D61—Graphite. 1"x5/16"x1/4". Control. One used with D60 and 79.
D64—Graphite. 1-3/16" long, 5/16" diameter. Control. One used.
D79—Metal-Graphite. 1-1/4"x1"x1/4". Main. Two used with D61.

To Fit Dyneto Generator

D63—Graphite. 3/4"x7/8"x3/8". Main. Two used.
D70—Graphite. 3/4"x7/8"x3/8". Main. Two used with D71.
D71—Graphite. 3/4"x7/8"x3/8". Control. One used with D70.
D81—Graphite. 3/4"x3/4"x1/4". Main. Two used with D82.
D82—Graphite. 3/4"x3/4"x1/4". Control. One used with D81.

To Fit Eisemann Magneto-Generator

E19—Metal-Graphite. 3/4"x5/8"x5/16". Main. Two used with E20.
E20—Grapnite. 5/8"x7/16"x3/16". Control. One used with E19.

To Fit Ford Starter
(also known as Liberty Starter)

F5—Metal. 13/16"x3/4"x3/8". Same as L14. Four used.

To Fit Ford Generator
(also known as Liberty Generator)

F6—Graphite. 13/16"x3/4"x3/8". Main. Same as L15 except softer material. Two used with F7.
F7—Graphite. 13/16"x3/4"x3/16". Control. Same as L16. One used with F6.

To Fit Gray and Davis Starter

G7—Metal. 7/8"x3/4"x3/8". Two used.
G8—Metal. 1-11/32"x1-1/8"x11/32". Two used.
G13—Metal. 21/32"x3/4"x3/8". Two used.
G25—Metal. 21/32"x3/4"x3/8". Two used.
G32—Metal. 5/8"x3/4"x5/16". Four used.

To Fit Gray and Davis Generator

G1—Metal-Graphite. 25/32"x5/8"x5/16". Main. Two used.
G2—Metal-Graphite. 3/4"x7/16"x3/8". Main. Two pairs used.

To Fit Gray and Davis Generator

G3—Metal-Graphite. 5/8"x7/16"x3/8". Main. Two used.
G4—Metal-Graphite. 3/4"x1/2"x3/8". Main. Two used.
G5—Metal-Graphite. 3/4"x5/8"x3/8". Main. Two used.
G15—Metal-Graphite. 5/8"x7/16"x3/8". Main. Two used.
G17—Metal-Graphite. 15/16"x5/8"x5/16". Main. Two used.
G20—Metal-Graphite. 15/16"x5/8"x5/16". Main. Two used.
G24—Graphite. 3/4"x3/8"x1/4". Control. One used.
G28—Metal-Graphite. 3/4"x1/2"x3/8". Main. Two used.
G30—Graphite. 3/4"x3/8"x1/4". Control. One used.
G33—Graphite. 3/4"x5/8"x1/4". Main and control. Three used.

To Fit Leece-Neville Starter

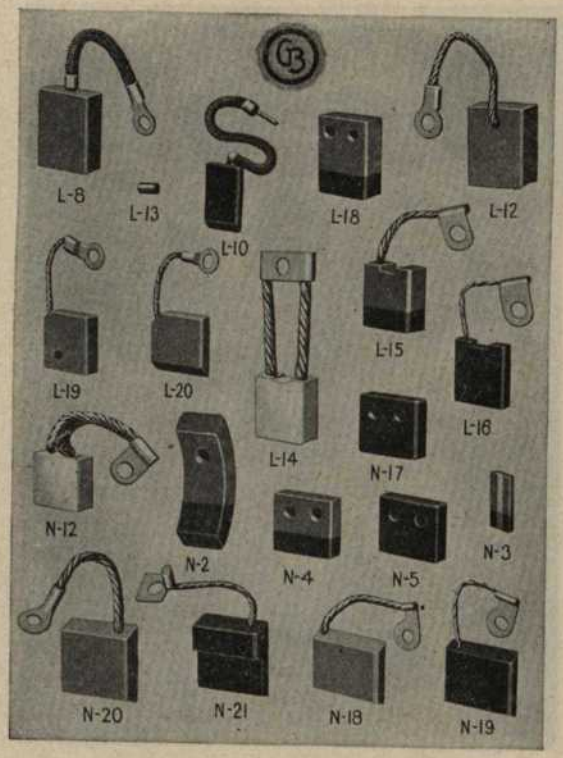
L1—Metal. 3/4"x1"x1/2". Two used.
L6—Metal-Graphite. 3/4" long, 1/2" diameter. One used.
L9—Metal. 3/4"x3/4"x3/8". Two used.
L17—Metal. 1"x3/4"x3/8". Four used.
L21—Metal. 13/16"x3/4"x1/4". Four used.

To Fit Leece-Neville Generator

L2—Metal-Graphite. 1"x3/4"x1/2". Main. Two used.
L3—Metal-Graphite. 1"x3/4"x3/8". Main. Two used.
L4—Metal-Graphite. 7/8"x1/2"x5/32". Control. One used.
L5—Metal-Graphite. 7/8" long, 3/8" diameter. Control. One used.
L7—Metal-Graphite. 1"x3/4"x1/4". Main. Two used.

For Ignition Replacement Parts Specification Charts, see pages 177-187.

Starter and Generator Brushes—Continued



To Fit Leece-Neville Generator

L8—Metal-Graphite. 1"x3/4"x3/8". Main. Two used.

L10—Metal-Graphite. 7/8"x1/2"x5/32". Control. Same as L4 except bevelled end. One used.

L12—Metal-Graphite. 1"x3/4"x1/2". Main. Two used.

L13—Metal. 1/4" long, 9/64" diameter. Contact.

L18—Graphite. 1"x3/4"x3/8". Main and control. Three used.

L19—Metal-Graphite. 3/4"x3/4"x1/4". Main. Two used with L20.

L20—Metal-Graphite. 3/4"x3/4"x1/4". Control. One used with L19.

To Fit Liberty Starter

(Also known as Ford Starter)

L14—Metal. 13/16"x3/4"x3/8". Same as F5. Four used.

To Fit Liberty Generator

(Also known as Ford Generator)

L15—Metal-Graphite. 13/16"x3/4"x3/8". Main. Same as F6 except harder material. Two used with L16.

L16—Graphite. 13/16"x3/4"x3/16". Control. Same as F7. One used with L15.

To Fit North East Starter

N12—Metal. 11/16"x3/4"x5/16". Four used.

To Fit North East Motor-Generator

N2—Metal-Graphite. 1-3/4"x5/8"x5/16". Four used.

N3—Graphite. 3/4"x3/8"x1/8". Switch contact. Two used.

N4—Metal-Graphite. 3/4"x7/8"x1/4". Main. Two used with N5.

N5—Graphite. 3/4"x7/8"x1/4". Control. One used with N4.

N20—Metal-Graphite. 1"x1"x5/16". Main. Two used with N21.

N21—Graphite. 1"x1"x5/16". Control. One used with N20.

To Fit North East Generator

N17—Graphite. 3/4"x7/8"x1/4". Main and control. Three used.

N18—Metal-Graphite. 27/32"x1"x1/4". Main. Two used with N19.

N19—Graphite. 27/32"x1"x3/16". Control. One used with N18.

To Fit Remy Starter

R6—Metal. 5/8"x1-1/4"x3/8". Four used.

R11—Copper Gauze. 5/8"x1-1/8"x1/4". For this brush in metal see R40. Two or four used.

R12—Copper Gauze. 9/16"x3/4"x1/4". For this brush in metal see R38. Two or four used.

R19—Metal. 1/2"x1-3/8"x1/2". Four used.

R32—Copper Gauze. 9/16"x3/4"x1/4". For this brush in metal see R39. Two or four used.

R33—Copper Gauze. 5/8"x1-1/8"x1/4". For this brush in metal see R41. Two or four used.

R35—Copper Gauze. 9/16"x3/4"x1/4". For this brush in metal see R36. Four used.

R36—Metal. 9/16"x3/4"x1/4". Same as R35 except made of metal. Four used.

R37—Metal. 1/2"x1-1/4"x3/8". Four used.

R38—Metal. 9/16"x3/4"x1/4". Same as R12 except made of metal. Two or four used.

R39—Metal. 9/16"x3/4"x1/4". Same as R32 except made of metal. Two or four used.

R40—Metal. 5/8"x1-1/8"x1/4". Same as R11 except made of metal. Two or four used.

R41—Metal. 5/8"x1-1/8"x1/4". Same as R33 except made of metal. Two or four used.

R56—Copper Gauze. 5/8"x3/4"x1/4". For this brush in metal see R59. Two used with R57.

R57—Copper Gauze. 5/8"x3/4"x1/4". For this brush in metal see R60. Two or four used.

R59—Metal. 5/8"x3/4"x1/4". Same as R56 except made of metal. Two used with R60.

R60—Metal. 5/8"x3/4"x1/4". Same as R57 except made of metal. Two or four used.

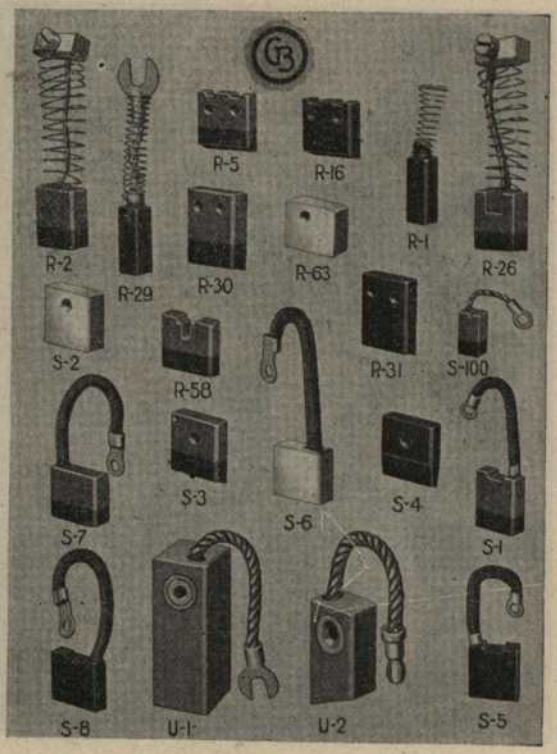
R61—Metal. 5/8"x3/4"x1/4". Two used with R62.

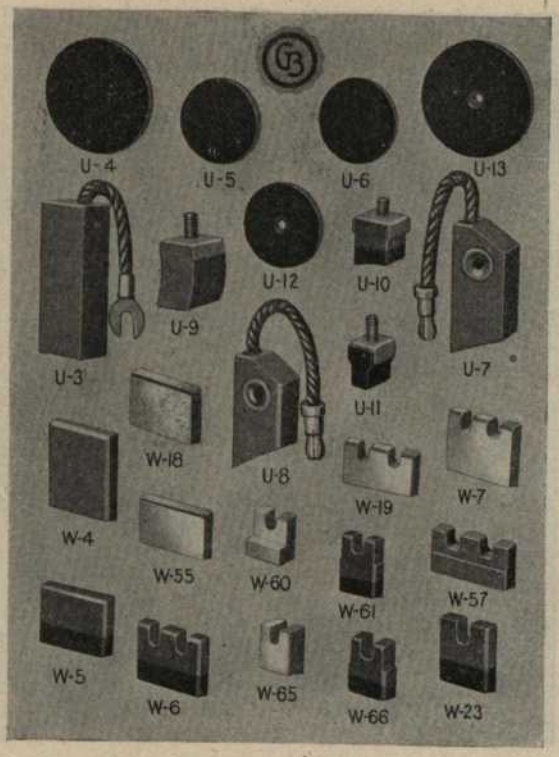
R62—Metal. 5/8"x3/4"x1/4". Two or four used.

R63—Metal. 5/8"x3/4"x5/16". (For illustration see next cut). Four used.

For Ignition Replacement Parts Specification Charts, see pages 177-187.

Starter and Generator Brushes—Continued





To Fit Remy Generator

R1—Graphite. 1"x5/16"x5/16". Control. One used with R2.
R2—Metal-Graphite. 3/4"x5/8"x5/16". Main. Two used with R1 or 29.
R5—Metal-Graphite. 3/4"x3/4"x1/4". Main. Two used with R16.
R16—Graphite. 3/4"x3/4"x1/4". Control. One used with R5.
R26—Metal-Graphite. 3/4"x5/8"x5/16". Main. Same as R2 except groove in top of brush. Two used.
R29—Graphite. 1-1/32"x5/16"x5/16". Control. One used with R2.
R30—Graphite. 1"x3/4"x5/16". Main. Two used with R31.
R31—Graphite. 1"x3/4"x1/4". Control. One used with R30.
R58—Graphite. 3/4"x3/4"x1/4". Main and control. Three used.

To Fit Simms Starter

S2—Metal. 3/4"x3/4"x5/16". Four used.
S6—Metal. 11/16"x3/4"x5/16". Four used.

To Fit Simms-Huff Motor-Generator

S1—Metal-Graphite. 3/4"x5/8"x1/4". Main. Five used with S5.
S5—Metal-Graphite. 3/4"x5/8"x1/4". Control. One used with S1.

To Fit Simms Generator

S3—Graphite. 7/8"x3/4"x1/4". Main. Two used with S4.
S4—Graphite. 7/8"x3/4"x1/4". Control. One used with S3.
S7—Graphite. 11/16"x3/4"x1/4". Main. Two used with S8.
S8—Graphite. 11/16"x3/4"x3/16". Control. One used with S7.

To Fit Splitdorf Generator
(Motorcycle Equipment)

S100—Graphite. 9/16"x5/16"x1/4". Main and control. Three used.

To Fit U. S. L. Motor-Generator
(Fly Wheel Type)

U1—Metal-Graphite. 2"x3/4"x3/4". Eight used.
U2—Metal-Graphite. 1-9/16"x1/2"x3/4". Eight used.

To Fit U. S. L. Motor-Generator
(Fly Wheel Type)

U3—Metal-Graphite. 2"x1/2"x3/4". Eight used.
U7—Metal-Graphite. 1-3/4"x1/2"x3/4". Eight used.
U8—Metal-Graphite. 1-9/16"x1/2"x3/4". Eight used.
U9—Metal-Graphite. 13/16"x3/4"x1/2". Six used.
U10—Metal-Graphite. 5/8"x1/2"x1/2". Main. Two used with U11.
U11—Graphite. 9/16"x1/2"x1/4". Control. One used with U10.

To Fit U. S. L. Regulator

U4—Graphite Disc. 1-1/2" diameter, 1/8" thick. Twenty-two used.
U5—Graphite Disc. 1-1/8" diameter, 1/8" thick. (Total set consists of fifteen U5 and sixteen U6).
U6—Graphite Disc. 1-1/8" diameter, 1/16" thick. (Total set consists of sixteen U6 and fifteen U5).
U12—Graphite Disc. 1-1/8" diameter, 1/8" thick. Counter-sunk hole in center of brush. Two used.
U13—Graphite Disc. 1-1/2" diameter, 1/8" thick. Counter-sunk hole in center of brush. Two used.

To Fit Wagner Starter

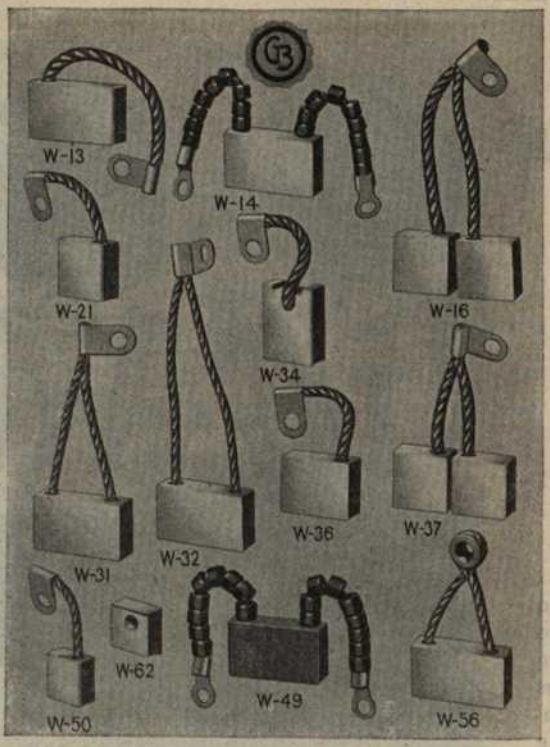
W4—Metal-Graphite. 1-1/4"x1"x1/4". Four used.
W7—Metal. 7/8"x1"x1/4". Four used.
W18—Metal. 13/16"x1"x1/4". Four used.
W19—Metal. 5/8"x1"x1/4". Four used.
W55—Metal. 11/16"x1"x1/4". Four used.
W57—Metal-Graphite. 21/32"x1-1/8"x5/16". Four used.
W60—Metal. 11/16"x1/2"x3/8". Four used.
W65—Metal. 11/16"x1/2"x3/8". Four used.

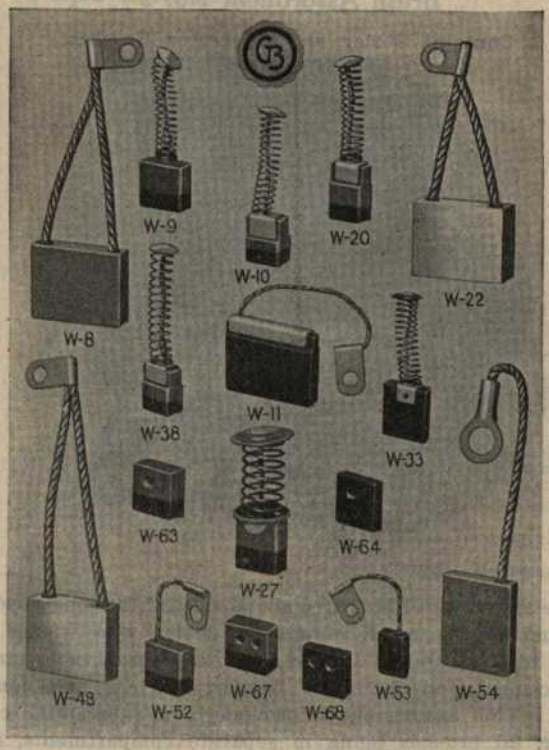
To Fit Wagner Generator

W5—Graphite. 7/8"x1"x1/4". Main and control. Three used.
W6—Graphite. 7/8"x1"x1/4". Main and control. Three used.
W23—Graphite. 15/16"x3/4"x1/4". Main and control. Three used.
W61—Graphite (soft grade). 27/32"x9/16"x1/4". Main and control. Three used.
W66—Graphite (soft grade). 27/32"x9/16"x5/16". Main. Two used with one W61.

For Ignition Replacement Parts Specification Charts, see pages 177-187.

Starter and Generator Brushes—Continued





To Fit Westinghouse Starter

W13—Metal. 3/4"x1-1/4"x3/8". Two used.

W14—Metal. 3/4"x1-1/4"x3/8". Two used.

W16—Metal. 3/4"x3/4"x3/8". Two pairs used.

W21—Metal. 3/4"x3/4"x3/8". Four used.

W31—Metal. 3/4"x1-1/4"x3/8". Two used.

W32—Metal. 3/4"x1-1/4"x3/8". Two used.

W34—Metal. 1"x3/4"x3/8". Four used.

W36—Metal. 3/4"x1"x3/8". Four used.

W37—Metal. 3/4"x3/4"x3/8". Two pairs used.

W49—Metal-Graphite. 3/4"x1-1/4"x3/8". Two used.

W50—Metal. 5/8"x5/8"x5/16". Four used.

W56—Metal. 3/4"x1-1/4"x3/8". Two used.

W62—Metal. 11/16"x5/8"x5/16". Four used.

To Fit Westinghouse Motor-Generator

W8—Metal-Graphite. 1"x1-1/4"x3/8". Main. Two used with W11.

W11—Graphite. 1"x1-1/4"x1/4". Control. One used with W8.

W22—Metal. 1"x1-1/4"x3/8". Two used.

W48—Metal. 1"x1-1/4"x3/8". Two used.

To Fit Westinghouse Generator

W9—Graphite. 3/4"x5/8"x5/16". Main. Two used.

W10—Graphite. 5/8"x1/2"x5/16". Main. Two used.

W20—Graphite. 3/4"x1/2"x5/16". Main. Two used.

W27—Graphite. 3/4"x5/8"x5/16". Main. Two used.

W33—Graphite. 3/4"x5/8"x3/16". Control. One used.

W38—Graphite. 5/8"x1/2"x5/16". Main. Two used.

W52—Graphite. 5/8"x5/8"x5/16". Main. Two used with W53.

W53—Graphite. 5/8"x3/8"x3/16". Control. One used with W52.

W63—Graphite. 11/16"x5/8"x5/16". Main. Two used with W64.

W64—Graphite. 11/16"x5/8"x3/16". Control. One used with W63.

W67—Graphite. 21/32"x5/8"x5/16". Main. Two used with W68.

W68—Graphite. 21/32"x5/8"x3/16". Control. One used with W67.

To Fit White-Entz Motor-Generator

W54—Metal-Graphite. 1-1/4"x1"x1/4". Four used.

For Ignition Replacement Parts Specification Charts, see pages 177-187.

Ignition Parts Assortments

Brush Assortment No. 9

Contains Motor and Generator Brushes

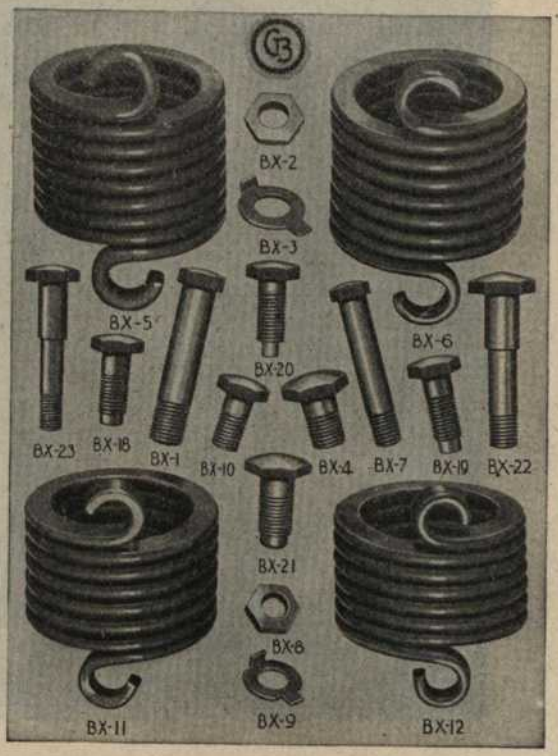
The assortment illustrated above will fill the long needed demand of the small garage or dealer who wishes to carry in stock only a limited number of brushes to make replacements on the most popular starters and generators. This assortment is packed in a substantial container, all brushes being in separate compartments, the partitions of which are properly numbered to correspond to our regular code. The assortment consists of approximately 135 brushes and lists for $55.00. Box measures 14x11½x1⅜ inches.

Brush Assortment No. MBA Junior

Contains Magneto and Distributor Brushes.

This assortment consists of a good supply of magneto and battery distributor brushes (with springs) which are commonly used. The assortment is packed in a substantial container, all brushes being in separate compartments, the partitions of which are marked to correspond to our regular code. The assortment consists of approximately 110 brushes and lists for $18.00. Box measures 8x6½x1¼ inches.

Bendix Springs



To Fit Bendix Drive

BX1—Spring Bolt, to fit large hollow type drive.

BX2—Spring Bolt Nut, to fit BX1.

BX3—Lock Washer, to fit BX1 and BX4.

BX4—Spring Screw, to fit large hollow type drive.

BX5—Driving Spring (Right Hand), to fit large hollow type drive. Eight coil spring.

BX6—Driving Spring (Left Hand), to fit large hollow type drive. Eight coil spring.

BX7—Spring Bolt, to fit small hollow type drive.

BX8—Spring Bolt Nut, to fit BX7.

BX9—Lock Washer, to fit BX7 and BX10.

BX10—Spring Screw, to fit small hollow type drive.

BX11—Driving Spring (Right Hand), to fit small hollow type drive. Seven coil spring.

BX12—Driving Spring (Left Hand), to fit small hollow type drive. Seven coil spring.

BX14—Driving Spring, extra heavy. **(Right Hand).** To fit large hollow type drive. Eight coil spring. (See cut BX5).

BX15—Driving Spring, extra heavy. **(Left Hand).** To fit large hollow type drive. Eight coil spring. (See cut BX6).

BX16—Driving Spring, extra heavy. **(Right Hand).** To fit small hollow type drive. Seven coil spring. (See cut BX11).

BX17—Driving Spring, extra heavy. **(Left Hand).** To fit small hollow type drive. Seven coil spring. (See cut BX12).

BX18—Spring Bolt, 15/16" long ¼" tip dia. To fit small hollow type drive.

BX19—Spring Bolt, 1" long ¼" tip dia. To fit small hollow type drives using extra heavy springs.

BX20—Spring Bolt, 1" long 3/16" tip dia. To fit Ford Bendix drive.

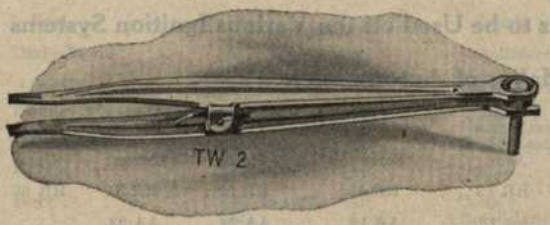
BX21—Spring Bolt, 15/16" long 5/16" tip dia. To fit special large hollow type drive.

BX22—Spring Bolt, special, with shoulder. To fit large hollow type drive.

BX23—Spring Bolt, special, with shoulder. To fit small hollow type drive.

BX30—Ford Driving Spring (Left Hand), to fit Ford Bendix drive. (See cut BX12).

Wrench Kits—Taps and Dies

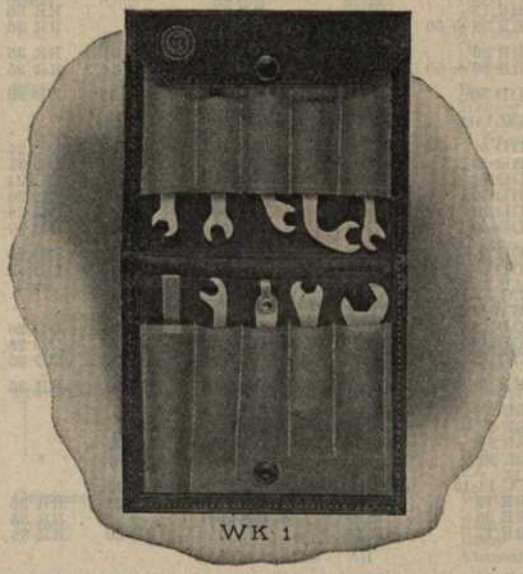


TW2—Ignition Contact Screw Tweezers

Used to hold contact screw in position while applying wrench to start screw into contact block.

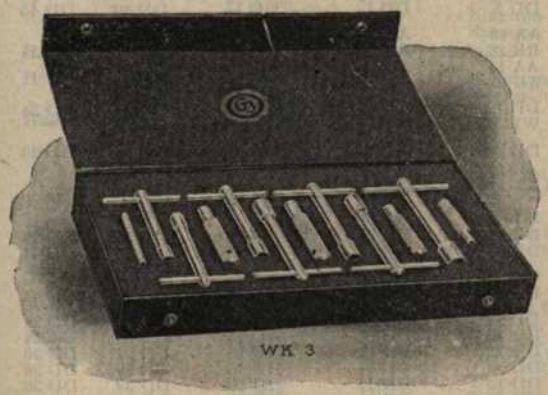
These tweezers are especially adaptable to Bosch and North East battery distributors and also other ignition systems where contact screws are more or less inaccessible.

Can supply display card carrying six tweezers if desired.

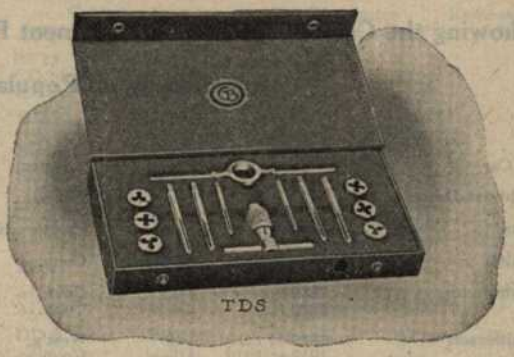


WK1—Ignition Wrench Kit—Pocket Size

The above kit fulfills the average demand for wrenches to fit all of the popular magnetos and battery distributors. The set consists of eight wrenches, a midget contact point file and a spacing gauge complete with reliable chart showing spacings of contact points on all popular magnetos and distributors. The case is substantially made of an excellent grade of fabricoid and folds to convenient pocket size.



Code	Net Weight	Dimensions
WK3	24 oz.	5¼"x10½"x1"



Taps and Dies

To fit popular Magnetos and Distributors. All taps and dies can be purchased separately or complete in set. Each Tap and Die stamped with correct code number as follows:

TD1—Tap, to fit screw holder on Bosch Magneto and Dist.
TD2—Die, to fit all popular Bosch contact screws.
TD3—Tap, to fit contact screw holder on Delco Distributor.
TD4—Die, to fit all Delco contact screws.
TD5—Tap, to fit contact screw holder on Eisemann Magneto.
TD6—Die, to fit Eisemann contact screws.
TD7—Tap, to fit screw holder on North East Distributor.
TD8—Die, to fit North East contact screws.
TD9—Tap, to fit contact screw holder on Remy Distributor.
TD10—Die, to fit all Remy contact screws.
TD11—Tap, to fit contact screw holder on Wagner Dist.
TD12—Die, to fit Wagner contact screws.
TD100—Adjustable Tap Holder, to fit all Gilfillan Taps.
TD101—Die Holder, to fit all Gilfillan Dies.
TDS—Tap and Die Set. Includes TD1 to TD101 packed in substantial case, cloth lined and fabricoid covered.

Code	Net Weight	Dimensions
TDS—Set Complete	8 oz.	4"x8¼"x1"

WK2—Ignition Wrench Kit

The set of wrenches illustrated above is designed to fill every adjustment demand in the way of ignition service. This set is complete in every detail and consists of magneto and distributor wrenches to fit every type of ignition apparatus. The case is lined with the best quality of cloth and each article is recessed in place securely. The outer covering of case is of the highest quality of fabricoid.

Code	Net Weight	Dimensions
WK2	15 oz.	4¾x10¼x1"

WK3—Socket Wrench Kit

All Socket Wrenches can be purchased separately or complete in kit.

For separate wrenches see (Automotive Electrical Tools) shown on preceding pages.

This set consists of eleven special socket wrenches which have long been in demand among the ignition mechanics. All of the tools are made of high grade steel and properly tempered. The hexagon socket openings range in eleven sizes from 7/16" down to 1/8". These wrenches are designed to fit exceptionally small hexagon nuts and screws as used on ignition units, lighting switches, regulators, ammeters, etc.

Ignition Parts Guide

Showing the Correct Ignition Replacement Parts to be Used on the Various Ignition Systems installed on all Popular Makes of Automobiles.

Car	Year	Model	System	Contact Arm	Contact Screw	Distributor Rotor	Distributor Cover	Resistance Unit
Abbott-Detroit	1917	8-44, 6-44	Remy	RR 12	RR 13	RR 22	RR 31	RR 36
Ace	1920-21	TL	Atwater Kent	AA 13	AA 12	AA 24	AA 23	*
Allen	1917 to 1921	All	Conn.	CC 14-15	CC 16	CC 21	CC 26	
American	1919	All	Conn.	CC 14-15	CC 16	CC 21	CC 27	
	1920	All	Conn.	CC 14-15	CC 16	CC 32	*	
Anderson	1916-17 early	6-40	West'g.	WW 3	WW 4	*	*	
	1917 to 1919	All	Conn.	CC 14-15	CC 16	CC 21	CC 27	
	1920 to 1923	All	Remy	RR 26	RR 27	RR 29B	RR 34	RR 35
Apperson	1916-17	6 cyl.	Remy	RR 12	RR 13	RR 22	RR 31	RR 36
	1917	8 cyl.	Remy	RR 12	RR 13	RR 23	*	RR 36
	1918 to 1923	8 cyl.	Remy	RR 26 or 50	RR 27 or 60	RR 29D	*	RR 36
Auburn	1917-18	All	Remy	RR 26	RR 27	RR 22	RR 31	RR 35
	1919 to 1923	All	Remy	RR 26 or 50	RR 27 or 60	RR 29B	RR 34	RR 35
Barley	1922-23	All	Delco	DD 50	DD 1	DD 51	DD 53	DD 26
Briscoe	1917 to 1921	All	Conn.	CC 14-15	CC 16	CC 21	CC 26	
Buick	1917	4 cyl.	Delco	DD 5	DD 1	DD 16	DD 20	DD 24
	1918	4 cyl.	Delco	DD 12	DD 11	DD 16	DD 20	DD 24
	1918 to 1920	6 cyl.	Delco	DD 12	DD 11	DD 16	DD 21	DD 24
	1922-23	4 cyl.	Delco	DD 50	DD 1	DD 51	DD 52	DD 26
	1921-22	6 cyl.	Delco	DD 12	DD 11	DD 16	DD 39	DD 26
	1923	6 cyl.	Delco	DD 50	DD 1	DD 51	DD 53	DD 59
Cadillac	1917 to 1919	All	Delco	DD 5	DD 1	DD 15	DD 22	DD 25
	1920 to 1923	All	Delco	DD 5	DD 1	DD 15	DD 40	DD 42
Case	1917	T-17	Conn.	CC 14-15	CC 16	CC 21	CC 26	
	1918-19	U	West'g.	WW 3	WW 4	*	*	
	1920-21	V	Delco	DD 12	DD 11	DD 16	DD 21	DD 26
	1922-23	X	Delco	DD 12	DD 11	DD 16	DD 39	DD 26
	1923	W	Delco	DD 12	DD 11	DD 16	DD 55	DD 26
Chalmers	1917 to 1923	All	Remy	RR 26 or 50	RR 27 or 60	RR 29B	RR 34	RR 35
Chandler	1917 to 1919	All	Bosch DU 6	LL 2	LL 1	LL 11		
	1920 to 1922	All	If Bosch DU 6	LL 2	LL 1	LL 11		
			If Bosch B 6	LL 2	LL 1	LL 41	LL 43	
	1923	All	Bosch Dist.	LL 50	LL 51	LL 54	LL 56	*
Chevrolet	1917 early	490	Conn.	CC 14-15	CC 16	CC 21	CC 26	
	1917	6 cyl.	Remy	RR 12	RR 13	RR 22	RR 31	RR 35
	1917-18	8 cyl.	Remy	RR 26	RR 27	RR 29D	*	RR 35
	1917	F2-F5 4 cyl.	Remy	RR 12	RR 13	RR 21	RR 30	RR 35
	1917 to 1922	All except models listed above	Remy	RR 26	RR 27	RR 29A	RR 33	RR 35
	1922-23	All	Remy	RR 26 or 50	RR 27 or 60	RR 29B	RR 33	RR 35
Cleveland	1919	All	Bosch DU 6	LL 2	LL 1	LL 11		
	1920-21	All	If Bosch DU 6	LL 2	LL 1	LL 11		
			If Bosch B 6	LL 2	LL 1	LL 41	LL 43	
	1922-23	All	If Bosch DU 6	LL 2	LL 1	LL 11		
			If Bosch Dist.	LL 50	LL 51	LL 54	LL 56	*
Cole	1916-17	860	If Delco No. 5135	DD 5	DD 1	DD 16	DD 22	DD 24
			If Delco No. 5153	DD 12	DD 11	DD 16	DD 22	DD 24
	1918-19	860 and 870	Delco	DD 12	DD 11	DD 16	DD 22	DD 26
	1920 to 1923	All	Delco	DD 5	DD 1	DD 15	DD 40	DD 45
Columbia	1918 to 1920	All	If Atwater Kent	AA 13	AA 12	AA 24	AA 23	
	1918-19	All	If Remy	RR 26	RR 27	RR 29B	RR 34	RR 35
	1921-22 early	All	Atwater Kent	AA 13	AA 12	AA 24	AA 23	
	1922 late & 23	All	Auto-Lite	AL 10	AL 11	AL 13	AL 15	*
Comet	1917	C-50	Delco	DD 12	DD 11	DD 16	DD 21	DD 24
	1920 to 1922	All	Wagner	WW 200	WW 201	WW 202	WW 203	*
Cortland	1923	All	Delco	DD 50	DD 1	DD 51	DD 53	DD 26
Crow-Elkhart	1917 to 1921	4 cyl.	Conn.	CC 14-15	CC 16	CC 20	CC 23	
		6 cyl.	Conn.	CC 14-15	CC 16	CC 21	CC 27	
Cunningham	1917	All	West'g.	WW 3	WW 4	*	*	
	1918-19	All	Delco	DD 12	DD 11	DD 16	DD 22	DD 26
	1920 to 1923	All	Delco	DD 5	DD 1	DD 15	DD 40	DD 41
Daniels	1917 to 1919	All	West'g.	WW 3	WW 4	*	*	
	1920 to 1923	All	Delco	DD 5	DD 1	DD 15	DD 40	DD 41
Davis	1917	All	Delco	DD 12	DD 11	DD 16	DD 21	DD 24
	1918-19	H-I-K	Delco	DD 12	DD 11	DD 16	DD 21	DD 24
	1918-19	J	Delco	DD 12	DD 11	DD 16	DD 21	DD 26
	1920-21	All	Delco	DD 12	DD 11	DD 16	DD 39	DD 26
	1922	61 to 67 inc.	Delco	DD 12	DD 11	DD 16	DD 39	DD 26
	1922-23	71-72	Delco	DD 50	DD 1	DD 51	DD 53	DD 26
	1923		Delco, No. 257 Gen.	DD 50	DD 1	*	*	DD 52

*Can not supply

Ignition Parts Guide—Continued

Car	Year	Model	System	Contact Arm	Contact Screw	Distributor Rotor	Distributor Cover	Resistance Unit
Dixie-Flyer	1917	All	If Splitdorf	SS 13	SS 14	SS 34		
	1917 to 1920	All	If Conn.	CC 14-15	CC 16	CC 20	CC 28	
	1921	All	Eisemann	EE 21	EE 1			
Dodge	1917-18	All	Delco	DD 12	DD 11	DD 16	*	*
	1919 to July 1st	All	North East	NE 1	NE 2	NE 4	NE 6	
	1919 late to 23	All	North East	NE 1	NE 2	NE 10	NE 11	
Dorris	1917 to 1923	All	Bosch	LL 2	LL 1			
Dort	1917 to 1922	All	Conn.	CC 14-15	CC 16	CC 20	CC 23	
	1923	4 cyl.	Bosch Dist.	LL 50	LL 51	LL 54	LL 55	*
	1923	6 cyl.	Bosch Dist.	LL 50	LL 51	LL 54	LL 56	*
Dupont	1921	All	Eisemann	EE 21	EE 1			
Durant	1921 to 1923	4 cyl.	Auto-Lite	AL 10	AL 11	AL 13	AL 14	*
		6 cyl.	Auto-Lite	AL 10	AL 11	AL 13	AL 15	*
Duesenberg	1922-23	All	Delco	DD 5	DD 1	DD 15	DD 40	DD 44
Earl	1921	All	Conn.	CC 14-15	CC 16	CC 21	CC 26	
	1922-23	All	Conn.	CC 14-15	CC 16	CC 35	CC 36	
Elcar	1916-17	4 cyl.	Delco	DD 12	DD 11	DD 16	DD 20	DD 24
	1918-19	4 cyl.	Atwater Kent	AA 13	AA 12	AA 24	AA 21	
		6 cyl.	Atwater Kent	AA 13	AA 12	AA 24	AA 23	
	1922	4 cyl.	Delco	DD 12	DD 11	DD 16	DD 38	DD 26
	1920 to 1922	6 cyl.	Delco	DD 12	DD 11	DD 16	DD 39	DD 26
Elgin	1916-17	All	Remy	RR 12	RR 13	RR 22	RR 31	RR 35
	1918 to 1921	All	Wagner	WW 200	WW 201	WW 202	WW 203	*
	1922-23	All	If Remy	RR 26 or 50	RR 27 or 60	RR 53	RR 55	RR 35
			If Wagner	WW 200	WW 201	WW 202	WW 203	*
Essex	1919	All	Delco No. 5193 Dist.	DD 5	DD 1	DD 16	DD 20	DD 25
	1919-20	All	Delco No. 5205 Dist.	DD 5	DD 1	DD 16	DD 38	DD 41
	1921	All	Delco	DD 5	DD 1	DD 15	DD 38	DD 41
	1922-23	All	If Delco	DD 5	DD 1	DD 15	DD 38	DD 41
			If Bosch Dist.	LL 50	LL 51	LL 54	LL 55	*
Ford	1917 to 1921	All	Coil Vibrator	CC 1	CC 2			
	1922-23	All	If Coil Vibrator	CC 1	CC 2			
			If Atwater Kent L. A. Ford used	*	*	AA 33	AA 31	
			If Bosch Dist. used	LL 50	LL 51	LL 54	LL 55	*
Franklin	1917 to 1920	All	Atwater Kent	AA 4a	AA 3a	AA 16	AA 20	
	1921	All	Atwater Kent	AA 13	AA 12	AA 24	*	
	1922-23	All	If Atwater Kent C A F used	AA 13	AA 12	AA 24	*	
			If Atwater Kent RA Vertical used	*	*	AA 24	AA 32	
Gardner	1920 to 1923	All	West'g.	WW 9	WW 10	WW 11	*	*
Grant	1917	All	Remy	RR 12	RR 13	RR 22	RR 31	RR 35
	1918 to 1920	All	Remy	RR 26	RR 27	RR 29B	RR 34	RR 35
	1921 to 1923	All	Atwater Kent	AA 13	AA 12	AA 24	AA 23	
Gray	1922-23	All	Auto-Lite	AL 10	AL 11	AL 13	AL 14	*
Halladay	1917 to 1919	All	West'g.	WW 3	WW 4	*	*	
Handley-Knight	1921	All	If Conn.	CC 14-15	CC 16	CC 21	CC 26	
	1922-23	All	If Conn.	CC 14-15	CC 16	CC 21	CC 26	
			If Auto-Lite	AL 10	AL 11	AL 13	AL 14	*
Hanson	1918-19	All	Remy	RR 12	RR 13	RR 22	RR 31	RR 35
	1920 to 1922	All	Delco	DD 12	DD 11	DD 16	DD 39	DD 26
Haynes	1917	6 cyl.	Remy	RR 12	RR 13	RR 22	RR 31	RR 36
	1917	12 cyl.	Delco	DD 12	DD 11	DD 16	DD 21	DD 43
	1918 to 1921	6 cyl.	Kingston	KK 200	KK 201	KK 202	*	
	1922-23	6 cyl.	Kingston	*	KK 201	KK 202	*	
H. C. S.	1921 to 1923	All	Delco	DD 12	DD 11	DD 15	DD 38	DD 25
Holmes	1918-19	All	Eisemann	EE 3	EE 1			
	1920 to 1922	All	Eisemann	EE 21	EE 1			
Hudson	1917 to 1919	H-J-M	Delco	DD 5	DD 1	DD 16	DD 21	DD 25
	1919-20	O	Delco	DD 5	DD 1	DD 16	DD 39	DD 41
	1921	O	Delco	DD 5	DD 1	DD 15	DD 39	DD 41
	1922-23	All	If Delco	DD 5	DD 1	DD 15	DD 39	DD 41
			If Bosch Dist.	LL 50	LL 51	LL 54	LL 56	*
Huffman	1919 to 1921	All	Conn.	CC 14-15	CC 16	CC 21	CC 27	
Hupmobile	1917	All	Atwater Kent	AA 4a	AA 3a	AA 15	AA 19	
	1918 to 1923	All	Atwater Kent	AA 13	AA 12	AA 24	AA 21	
Jackson	1917	8 cyl.	Remy	RR 12	RR 13	RR 23	*	RR 35
	1919-20	6 cyl.	Remy	RR 26	RR 27	RR 29B	RR 34	RR 35
Jewett	1922-23	All	Atwater Kent	*	*	AA 34	*	
Jordan	1917-18 early	All	Bosch	LL 2	LL 1	LL 11		
	1918 to 1920	All	Delco	DD 12	DD 11	DD 16	DD 21	DD 26
	1920 to 1922	All except model C	Delco	DD 12	DD 11	DD 16	DD 39	DD 26
	1923	All	Delco	DD 50	DD 1	*	*	DD 59
King-8	1917	All	Atwater Kent	AA 4a	AA 3a	AA 17	*	
	1918 to 1922	All	Atwater Kent	AA 13	AA 12	AA 28	*	

*Can not supply

Ignition Parts Guide—Continued

Car	Year	Model	System	Contact Arm	Contact Screw	Distributor Rotor	Distributor Cover	Resistance Unit
Kissel	1917	12 cyl.	Delco	DD 12	DD 11	DD 16	DD 21	DD 24
	1916 to 1918	100 point Six	If Remy No. 109C-F Dist.	RR 12	RR 13	RR 22	RR 31	RR 36
	1918 to 1921	100 point Six	If Remy No. 353-A Dist.	RR 26	RR 27	RR 29B	RR 34	RR 35
	1922-23	All	If Remy No. 606-B Dist.	RR 49	RR 41	RR 51	RR 52	RR 35
			If Remy No. 626-B Dist.	RR 26 or 50	RR 27 or 60	RR 53	RR 55	RR 35
Lafayette	1921-22	All	Delco	DD 5	DD 1	DD 15	*	DD 58
Leach	1920-21	All	Delco	DD 12	DD 11	DD 16	DD 39	DD 26
	1922	All	Delco	DD 5	DD 1	DD 15	DD 39	DD 41
Lexington	1917-18	6P	West'g.	WW 3	WW 4	*	*	
	1917 to 1919	All except 6P	Conn.	CC 14-15	CC 16	CC 21	CC 27	
	1920 to 1923	All	Conn.	CC 14-15	CC 16	CC 32	*	
Liberty	1917	All	Delco	DD 12	DD 11	DD 16	DD 21	DD 24
	1918-1919	All	Atwater Kent	AA 13	AA 12	AA 24	AA 23	
	1920 to 1923	All	Wagner	WW 200	WW 201	WW 202	WW 203	*
Lincoln-8	1921 to 1923	All	Delco	DD 12	DD 11	*	*	DD 26
Locomobile	1916 to 1922	All	If Bosch	LL 2	LL 1			
			If Eisemann	EE 3 or EE21	EE 1			
			If Berling	BB 200a	BB 201a			
	1923	All	Delco	DD 5	DD 1	DD 15	DD 39	DD 46
Lorraine	1920 to 1922	All	West'g.	WW 9	WW 10	WW 11	*	*
Maibohm	1919 to 1921	All	Atwater Kent	AA 13	AA 12	AA 24	AA 23	
Marmon	1917 to 1919	All	Bosch	LL 2	LL 1			
	1920 to 1922	All	Delco	DD 5	DD 1	DD 15	DD 39	DD 44
	1923	All	Delco	DD 12	DD 11	DD 16	DD 55	DD 58
Maxwell	1917 early	All	Simms	SS 19	SS 18			
	1917 late to '22	All	Atwater Kent	AA 13	AA 12	AA 24	AA 21	
	1923	All	Remy No. 369A	RR 26 or 50	RR 27 or 60	RR 29B	RR 33	RR 35
McFarlan	1917 to 1919	All	Bosch	LL 2	LL 1			
	1920	All	Dual-West'g. and Bosch	WW 9 LL 2	WW 10 LL 1	WW 11	*	*
	1921	All	Dual-West'g. and Berling	WW 9 BB 200a	WW 10 BB 201a	WW 11	*	*
	1922-23	All	If Dual-West'g. and Bosch	WW 9 LL 2	WW 10 LL 1	WW 11	*	*
			If Splitdorf	SS 45	SS 46			
McLaughlin	1917 to 1921	All	Remy	RR 26	RR 27	RR 29B	RR 34	RR 35
	1922	All	Delco	DD 12	DD 11	DD 16	DD 39	DD 26
Mercer	1917 to 1920	All	Bosch	LL 2	LL 1			
	1921-22	All	If Eisemann	EE 21	EE 1			
			If Berling	BB 200a	BB 201a			
Merit	1922	All	Delco	DD 12	DD 11	DD 16	DD 39	DD 26
Meteor	1917 to 1919	All	Delco	DD 12	DD 11	DD 16	DD 21	DD 24
	1919 late & '20	All	Delco	DD 12	DD 11	DD 16	DD 21	DD 26
	1920 late to '22	All	Delco	DD 12	DD 11	DD 16	DD 39	DD 26
	1923	All	Delco	DD 12	DD 11	DD 16	DD 55	DD 26
Metz	1917 early	All	Splitdorf	SS 13	SS 14	SS 34		
	1917 late	All	Atwater Kent	AA 4a	AA 3a	AA 15	AA 19	
	1918	All	Atwater Kent	AA 13	AA 12	AA 24	AA 21	
	1919 to 1922	All	Conn.	CC 14-15	CC 16	CC 21	CC 27	
Miller	1922	All	Delco	DD 12	DD 11	DD 16	DD 39	DD 26
Mitchell	1917 early	All	Conn.	CC 14-15	CC 16	CC 20	CC 24	
	1917-18	All	If Conn.	CC 14-15	CC 16	CC 21	CC 27	
	1917 to 1923	All	If Remy	RR 26 or 50	RR 27 or 60	RR 29E	RR 34	RR 35
Moline-Knight	1917 to 1919	All	If Bosch	LL 2	LL 1			
	1917 to 1919	All	If Conn.	CC 14-15	CC 16	CC 21	CC 26	
Monroe	1917 to 1921	All	Conn.	CC 14-15	CC 16	CC 21	CC 26	
Moon	1917 to 1919	All	If Delco	DD 12	DD 11	DD 16	DD 21	DD 24
	1919-20	All	If Wagner	WW 200	WW 201	WW 202	WW 203	*
	1920	All	If Delco No. 5208	DD 12	DD 11	DD 16	DD 39	DD 26
	1920	All	If Delco No. 5175	DD 12	DD 11	DD 16	DD 21	DD 26
	1920-21	All	If Delco No. 5215	DD 12	DD 11	DD 16	DD 39	DD 26
	1922-23	All	If Delco No. 5208	DD 12	DD 11	DD 16	DD 39	DD 26
	1922-23	All	If Delco No. 241 Gen.	DD 50	DD 1	DD 51	DD 53	DD 26
	1923	All	If Delco No. 257 Gen.	DD 50	DD 1	*	*	DD 59
Moore	1918 to 1920	All	Conn.	CC 14-15	CC 16	CC 21	CC 26	
Nash	1917	6 cyl.	Delco	DD 12	DD 11	DD 16	DD 21	DD 43
	1918	4 cyl.	Delco	DD 12	DD 11	DD 16	DD 20	DD 43
	1919	6 cyl.	Delco	DD 12	DD 11	DD 16	*	DD 26
	1920 to '22 early	6 cyl.	Wagner	WW 200	WW 201	WW 202	WW 203	*
	1920 to '22 early	4 cyl.	Wagner	WW 200	WW 201	WW 202	*	*
	1922	6 cyl.	Delco	DD 12	DD 11	DD 16	DD 55	DD 26
	1922	4 cyl.	Delco	DD 12	DD 11	DD 16	*	DD 26
	1923	6 cyl.	Delco	DD 12	DD 11	DD 16	DD 55	DD 59
	1923	4 cyl.	Delco	DD 12	DD 11	DD 16	*	DD 59

*Can not supply

Ignition Parts Guide—Continued

Car	Year	Model	System	Contact Arm	Contact Screw	Distributor Rotor	Distributor Cover	Resistance Unit
National	1917-18	All	If Splitdorf	SS 13 or 27	SS 14			
	1917 to 1919	All	If Delco No. 5162	DD 5	DD 1	DD 16	DD 21	DD 43
	1918-19	All	If Delco No. 5175	DD 12	DD 11	DD 16	DD 21	DD 26
	1920 to 1922	All	Delco	DD 12	DD 11	DD 16	DD 39	DD 26
Nelson	1917 to 1920	All	Bosch	LL 2	LL 1	LL 11		
Oakland	1916-17	50	If Delco No. 5135	DD 5	DD 1	DD 16	DD 22	DD 24
			If Delco No. 5153	DD 12	DD 11	DD 16	DD 22	DD 24
	1917	32B-34	Delco	DD 12	DD 11	DD 16	DD 21	DD 24
	1917 to 1922	34, 34B-C-D	Remy	RR 26	RR 27	RR 29B	RR 34	RR 35
	1922-23	6-44	If Remy No. 606-B Dist.	RR 49	RR 41	RR 51	RR 52	RR 35
			If Remy No. 626-B Dist.	RR 26 or 50	RR 27 or 60	RR 53	RR 55	RR 35
Oldsmobile	1917 to 1919	37-6 cyl.	If Remy	RR 26	RR 27	RR 29B	RR 34	RR 35
	1917	45-8 cyl.	Delco	DD 12	DD 11	DD 16	DD 22	DD 24
	1917	37-6 cyl.	If Delco	DD 12	DD 11	DD 16	DD 21	DD 24
	1918-19	45A-B-8 cyl.	Delco	DD 12	DD 11	DD 16	DD 22	DD 26
	1920 to 1922	37A-6 cyl.	Remy	RR 26	RR 27	RR 29B	RR 34	RR 35
	1920 to 1923	All 8 cyl.	Delco	DD 5	DD 1	DD 15	DD 40	DD 45
	1921-22	All 4 cyl.	Remy	RR 26 or 50	RR 27 or 60	RR 29B	RR 33	RR 35
	1923	4 cyl.	Delco	DD 50	DD 1	*	*	DD 59
Overland	1917	4 cyl.	If Remy	RR 12	RR 13	RR 21	RR 30	RR 35
	1917	6 cyl.	If Remy	RR 12	RR 13	RR 22	RR 31	RR 35
	1917	89-6	If Conn.	CC 14-15	CC 16	CC 21	CC 27	
	1917 to '22 early	All 4 cyl.	If Conn.	CC 14-15	CC 16	CC 21	CC 26	
	1922 late & '23	Mystery & 91	Conn.	CC 14-15	CC 16	CC 35	CC 36	
Owen-Magnetic	1917 to 1919	All	Bosch	LL 2	LL 1			
	1920-21	All	Berling	BB 200A	BB 201A			
Packard	1917 to 1923	12 cyl.	Delco	DD 12	DD 11	DD 16B	*	*
	1921-22	6 cyl.	If Delco No. 5228	DD 12	DD 11	DD 15	*	DD 57
	1922-23	6 cyl.	If Delco No. 5249	DD 12	DD 11	DD 16	DD 55	DD 58
Paige	1917	6 cyl.	Remy	RR 12	RR 13	RR 22	RR 31	RR 36
	1918	6 cyl.	Remy	RR 26	RR 27	RR 29B	RR 34	RR 35
	1919 to 1921	All	Atwater Kent	AA 13	AA 12	AA 24	AA 23	
	1922-23	All	If A. K. CC or CA	AA 13	AA 12	AA 24	AA 23	
	1923	All	If A. K. type RA	*	*	AA 24	AA 32	
			Atwater Kent	*	*	AA 24	AA 32	
Parker	1923	All	Delco	DD 12	DD 11	DD 16	DD 55	DD 26
Patterson	1917 to 1919	All	Delco	DD 12	DD 11	DD 16	DD 21	DD 24
	1920	6-46 R	Delco	DD 12	DD 11	DD 16	DD 21	DD 24
	1920 to 1923	6-47	Delco	DD 12	DD 11	DD 16	DD 39	DD 26
Peerless	1917	All	Atwater Kent	AA 4a	AA 3a	AA 17	*	
	1918 to '22 early	All	Atwater Kent	AA 13	AA 12	AA 28	*	
	1922 late & '23	All	Delco	DD 50	DD 1	*	*	DD 60
Pierce-Arrow	1917-18	All	Dual-Bosch	LL 2	LL 1	LL 11		
			and West'g.	WW 3	WW 4	*	*	
	1919 to 1923	All	Delco	DD 5	DD 1	DD 15	DD 39	DD 46
Pilot	1917 to 1920	All	Delco	DD 12	DD 11	DD 16	DD 21	DD 24
Premier	1917	All	Delco	DD 5	DD 1	DD 16	DD 21	DD 24
	1918 to 1920	All	Delco	DD 12	DD 11	DD 16	DD 21	DD 24
	1921 to 1923	All	Delco	DD 12	DD 11	DD 15	DD 39	DD 26
	1919 to 1922	6 cyl.	Wagner	WW 200	WW 201	WW 202	WW 203	*
R. & V. Knight	1920 to 1922	4 cyl.	Wagner	WW 200	WW 201	WW 202	*	*
	1923	6 cyl.	Auto-Lite	AL 10	AL 11	AL 13	AL 15	*
	1923	4 cyl.	Auto-Lite	AL 10	AL 11	AL 13	AL 14	*
Reo	1917	6 cyl.	Remy	RR 12	RR 13	RR 22	RR 31	RR 35
	1917 to 1919	4 cyl.	Remy	RR 12	RR 13	RR 21	RR 30	RR 35
	1919 to 1923	6 cyl.	North East	NE 1	NE 2	NE 10	*	
Revere	1917 to 1921	All	Bosch DU6	LL 2	LL 1			
	1922-23	All	Bosch Dist.	LL 50	LL 51	LL 54	LL 56	*
Rickenbacker	1922-23	All	If Auto-Lite	AL 10	AL 11	AL 13	AL 15	*
			If Atwater Kent RA Vertical	*	*	AA 24	AA 32	
Riddle	1917-18	19	If Bosch Dist.	LL 50	LL 51	LL 54	LL 56	*
	1918 to 1920	19	If Delco No. 101	DD 12	DD 11	DD 16	DD 21	DD 24
	1921 to 1923	All	If Delco No. 5175	DD 12	DD 11	DD 16	DD 21	DD 26
Roamer	1917 to 1921	All	Delco	DD 12	DD 11	DD 16	DD 39	DD 26
	1922-23	All	Bosch	LL 2	LL 1			
			If Bosch	LL 2	LL 1			
			If Splitdorf	SS 45	SS 46			
Rolls-Royce	1917 to 1923	All	Bosch	LL 2	LL 1			
Sayers-Scoville	1917 to 1920	All	If Delco No. 105	DD 12	DD 11	DD 16	DD 21	DD 24
	1918 to 1920	All	If Delco No. 5175	DD 12	DD 11	DD 16	DD 21	DD 26
	1920 to 1922	All	If Delco Nos. 5207, 5208, 5215	DD 12	DD 11	DD 16	DD 39	DD 26
Saxon	1917	4 cyl.	Atwater Kent	AA 4a	AA 3a	AA 15	AA 19	
	1917 to 1919	6 cyl.	Remy	RR 12	RR 13	RR 22	RR 31	RR 35
	1920-21 early	Duplex-4	Wagner	WW 205	WW 201	WW 202	*	*
	1921 late-'22	Duplex-4	Wagner	WW 200	WW 201	WW 202	*	*

*Can not supply

Ignition Parts Guide—Continued

Car	Year	Model	System	Contact Arm	Contact Screw	Distributor Rotor	Distributor Cover	Resistance Unit
Scripps-Booth	1917	8 cyl.	Remy	RR 12	RR 13	RR 23	*	RR 36
	1917	4 cyl.	Remy	RR 26	RR 27	RR 21	RR 30	RR 35
	1918 to 1922	6 cyl.	Remy	RR 26	RR 27	RR 29B	RR 34	RR 35
Seagrave	1919 to 1921	4 cyl.	Delco	DD 12	DD 11	DD 16	DD 20	*
	1919 to 1921	6 cyl.	Delco	DD 12	DD 11	DD 16	DD 21	*
	1922	4 cyl.	Delco	DD 12	DD 11	DD 16	DD 38	*
	1922-23	6 cyl.	Delco	DD 12	DD 11	DD 16	DD 39	*
Sheridan	1921	All	Remy	RR 26	RR 27	RR 29A	RR 33	RR 35
Standard	1917 to 1919	All	Splitdorf	SS 27	SS 14			
	1920 to 1922	All	Dual-Splitdorf	SS 45	SS 46			
			& Atwater Kent	AA 13	AA 12	AA 28	*	
Star	1922-23	All	Auto-Lite	AL 10	AL 11	AL 13	AL 14	*
Stearns-Knight	1917 to 1919	8 cyl.	Remy	RR 12	RR 13	RR 23	*	RR 36
	1917 to 1919	4 cyl.	Remy	RR 12	RR 13	RR 21	RR 30	RR 36
	1920 to 1923	4 cyl.	Atwater Kent	AA 13	AA 12	AA 24	AA 21	
	1923	6 cyl.	Atwater Kent	AA 13	AA 12	AA 24	AA 23	
Stephens	1917-18	All	If Delco	DD 12	DD 11	DD 16	DD 21	DD 24
	1919	All	If Delco	DD 12	DD 11	DD 16	DD 21	DD 24
			If Conn	CC 14-15	CC 16	CC 21	CC 27	
	1920-21	All	Conn.	CC 14-15	CC 16	CC 21	CC 27	
	1922-23	All	If Conn.	CC 14-15	CC 16	CC 21	CC 27	
			If Auto-Lite	AL 10	AL 11	AL 13	AL 15	*
Studebaker	1917	4 cyl.	Remy	RR 12	RR 13	RR 21	RR 30	RR 35
	1917	6 cyl.	Remy	RR 12	RR 13	RR 22	RR 31	RR 35
	1918-19	4 cyl.	Remy	RR 26	RR 27	RR 29F	RR 33	RR 35
	1918-19	6 cyl.	Remy	RR 26	RR 27	RR 29E	RR 34	RR 35
	1920 to 1922	Special and Big Six	If Remy	RR 26	RR 27	RR 29E	RR 34	RR 35
	1920-21 early	Special and Big Six	If Wagner	WW 205	WW 201	WW 206	WW 203	*
	1921 late-'22	Special and Big Six	If Wagner	WW 200	WW 201	WW 206	WW 203	*
	1920 to 1922	Light Six	If Remy	RR 26	RR 41	RR 42	RR 52	RR 35
	1920-21 early	Light Six	If Wagner	WW 205	WW 201	WW206	WW 203	*
	1921 late-'22	Light Six	If Wagner	WW 200	WW 201	WW 206	WW 203	*
	1923	Special and Big Six	If Remy No. 358	RR 26 or 50	RR 27 or 60	RR 29E	RR 34	RR 35
			If Remy No.626F	RR 26 or 50	RR 27 or 60	RR 54	RR 55	RR 35
			If Wagner	WW 200	WW 201	WW 206	WW 203	*
	1923	Light Six	If Remy 606A	RR 26 or 50	RR 41	RR 42	RR 52	RR 35
			If Remy 626A	RR 26 or 50	RR 27 or 60	RR 54	RR 55	RR 35
			If Wagner	WW 200	WW 201	WW 202	WW 203	*
Stutz	1917	All	Bosch	LL 2	LL 1			
	1918-19	All	Delco	DD 5	DD 1	DD 15	DD 20	DD 26
	1920 to 1923	All 4 cyl.	Delco	DD 5	DD 1	DD 15	DD 38	DD 26
	1923	6 cyl.	Remy	RR 26 or 50	RR 27 or 60			
Templar	1918	All	Remy	RR 26	RR 27	RR 29A	RR 33	RR 35
	1919-20	All	Bosch	LL 2	LL 1			
	1921 to 1923	All	Simms	SS 19	SS 18			
Tulsa	1918	All	If Delco	DD 12	DD 11	DD 16	DD 20	DD 24
	1918-19 early	All	If Conn.	CC 14-15	CC 16	CC 20	CC 23	
	1919 late-'22	All	Conn.	CC 14-15	CC 16	CC 21	CC 26	
Velie	1917-18	All	If Remy 202 Dist.	RR 12	RR 13	RR 22	RR 31	RR 36
	1917 to 1919	All	If Remy 219 Dist.	RR 26	RR 27	RR 29B	RR 34	RR 35
	1920 to '22 early	All	Atwater Kent	AA 13	AA 12	AA 24	AA 23	
	1922 late-'23	All	Atwater Kent	*	*	AA 24	AA 32	
Westcott	1917 to 1919	Series 17-18 model A38	Delco	DD 12	DD 11	DD 16	DD 21	DD 24
	1918-19	Series 18A model A48-B48	Delco	DD 12	DD 11	DD 16	DD 21	DD 26
	1920-21	A48-G48	Delco	DD 12	DD 11	DD 16	DD 21	DD 26
	1922-23	Type C48-D48	Delco	DD 12	DD 11	DD 16	DD 21	DD 26
	1920-21	B38-G38	Delco	DD 12	DD 11	DD 16	DD 39	DD 26
	1922	C38-A44	Delco	DD 12	DD 11	DD 16	DD 39	DD 26
	1923	B44	If Delco No. 5208	DD 12	DD 11	DD 16	DD 39	DD 26
			If Delco No. 5256	DD 50	DD 1	*	*	DD 59
Wills-St. Claire	1922-23	All	Delco	DD 12	DD 11	*	*	DD 26
Willys-Knight	1917	8 cyl.	Remy	RR 12	RR 13	RR 23	*	RR 35
	1918 to 1921	4 cyl.	Conn.	CC 14-15	CC 16	CC 21	CC 26	
	1922-23	4 cyl.	If Conn. model 16	CC 14-15	CC 16	CC 21	CC 26	
			If Conn. model 18	CC 14-15	CC 16	CC 35	CC 36	
			If Auto-Lite	AL 10	AL 11	AL 13	AL 14	*
Winton	1917 to 1920	All	Bosch	LL 2	LL 1	LL 11		
	1921	All	If Bosch	LL 2	LL 1	LL 11		
			If Berling	BB 200a	BB 201a			
	1922	Series 3000 to 3299	Delco	DD 5	DD 1	DD 15	DD 39	DD 26
	1922	Series 3300 and up	Delco	DD 12	DD 11	DD 16	DD 39	DD 26
	1923	All	Delco	DD 12	DD 11	DD 16	DD 39	DD 59

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Motor and Generator Brush Guide

Showing the Correct Motor and Generator Brushes to be Used on the Various Starting and Lighting Systems Installed on All Popular Makes of Automobiles.

Car	Year	Model	System	Motor Brush	No. Used	Generator Main Brush	No. Used	Generator Control Brush	No. Used
Abbott-Detroit	1917	6-44	Remy	R 11 or 40	2	R 5	2	R 16	1
				R 33 or 41	2				
	1918	6-62	Remy	R 35 or 36	4	R 30	2	R 31	1
Ace	1921-22	All	Auto-Lite	A 38	4	A 41	2	A 42	1
Allen	1917	4 cyl. 37	If Auto-Lite	A 10	4	A 5	2		
	1917-18	4-37, 4-41	If West'g.	W 56	2	W 27	2	W 33	1
				W 32	2				
	1919	4-41	Auto-Lite	A 12	4	A 6	2		
	1920	43	If Auto-Lite	A 38	4	A 41	2	A 42	1
			If West'g.	W 62	4	W 52	2	W 53	1
	1921-22	All	West'g.	W 62	4	W 63	2	W 64	1
American	1919-20	B	West'g.	W 50	4	W 52	2	W 53	1
	1921	C, D, G	Gray & Davis	G 32	4	G 33	2	G 33	1
Anderson	1916-17	6-40	West'g.	W 31	2	W 27	2		
				W 32	2				
	1918	6-40	West'g.	W 21	4	W 52	2	W 53	1
	1919	A, E, & G	West'g.	W 50	4	W 52	2	W 53	1
	1920	8-20	Remy	R 61	2	R 30	2	R 31	1
				R 62	2				
	1920 to 1923	8-20	Remy	R 61	2	R 58	2	R 58	1
				R 62	2				
Apperson	1917 to 1919	All	Bijur	B 12	4	B 5	2	B 7	1
	1920-22 early	All	Bijur	B 12	4	B 53	2	B 54	1
	1922 late-23	All	Bijur	B 12	4	B 55	2	B 56	1
Auburn	1917-18	6-39	Remy	R 32 or 39	4	R 5	2		
	1919	6-39A	Remy	R 35 or 36	4	R 30	2	R 31	1
	1920	6-39A	If Remy 234E Gen.	R 56 or 59	2	R 30	2	R 31	1
				R 57 or 60	2				
	1920 to 1923	6-39A & 6-51	If Remy Gen. 913 A-B-C-F	R 56 or 59	2	R 58	2	R 58	1
				R 57 or 60	2				
Barley	1922	All	Delco	D 67 or 74	4	D 3	2	D 75	1
Briscoe	1917	All	Auto-Lite	A 12	4	A 6	2	A 6	1
	1918-19	All	Auto-Lite	A 12	4	A 4	2	A 6	1
	1920-21	All	If Auto-Lite	A 38	4	A 41	2	A 42	1
			If Gray & Davis	G 32	4	G 33	2	G 33	1
Buick	1917 to 1921	All 4 & 6 cyl.	Delco	D 8	1	D 2	2	D 38	1
				D 14	1				
	1922	All 6 cyl.	Delco	D 8	1	D 2	2	D 38	1
				D 14	1				
	1922-23	All 4 & 6 cyl.	Delco	D 12	1	D 32	2	D 90	1
				D 83	1				
Cadillac	1917 to 1919	55 & 57	Delco	D 12	2	D 6	2	D 11	1
	1920-21	59	Delco	D 84	4	D 87	2	D 87	1
	1922-23	61	Delco	D 12	2	D 6	2	D 11	1
Case	1917	T17-early	West'g.	W 21	4	W 27	2	W 33	1
	1917	T17-late	Auto-Lite	A 10	4	A 6	2	A 6	1
	1918-19 early	All	West'g.	W 21	4	W 52	2	W 53	1
	1919 late	All	Auto-Lite	A 10	4	A 4	2	A 6	1
	1920	All	West'g.	W 21	4	W 52	2	W 53	1
	1921	All	West'g.	W 50	4	W 52	2	W 53	1
	1922-23	All	Delco	D 67 or 74	4	D 3	2	D 75	1
Chalmers	1917	All	If West'g.	W 21	4	W 9	2		
	1917-18	All	If Auto-Lite	A 12	4	A 6	2		
	1918-19	6-30 & 35-C	If West'g.	W 21	4	W 52	2	W 53	1
	1919 to 1923	All	Auto-Lite	A 38	4	A 41	2	A 42	1
Chandler	1917-18 early	All	Gray & Davis	G 13	2	G 17	2	G 24	1
	1918 late-19	All	West'g.	W 21	4	W 52	2	W 53	1
	1920	All	Gray & Davis	G 32	4	G 33	2	G 33	1
	1921	All	If Gray & Davis	G 32	4	G 33	2	G 33	1
			If Bosch	B 50	4	B 51	2	B 52	1
	1922-23	All	Bosch	B 50	4	B 51	2	B 52	1
Chevrolet	1917	Baby Grand	Auto-Lite	A 12	4	A 5	2		
	1917	490 & 8 cyl.	Auto-Lite	A 12	4	A 6	2	A 6	1
	1918 to 1920	All	If Auto-Lite	A 12	4	A 4	2	A 6	1
	1919-20	All	If Remy	R 56 or 59	2	R 30	2	R 31	1
				R 57 or 60	2				
	1921-22	All	If Auto-Lite	A 12	4	A 4	2	A 6	1
			If Remy	R 56 or 59	2	R 30	2	R 31	1
				R 57 or 60	2				
	1923	All	Remy	R 63	2	R 58	2	R 58	1
Cleveland	1919	All	Gray & Davis	G 25	2	G 17	2	G 30	1
	1920	All	Gray & Davis	G 32	4	G 33	2	G 33	1
	1921	All	If Gray & Davis	G 32	4	G 33	2	G 33	1
			If Bosch	B 50	4	B 51	2	B 52	1
	1922-23	All	Bosch	B 50	4	B 51	2	B 52	1

Motor and Generator Brush Guide—Continued

Car	Year	Model	System	Motor Brush	No. Used	Generator Main Brush	No. Used	Generator Control Brush	No. Used
Cole	1917 to 1923	All	Delco	D 67 or 74	4	D 32	2	D 11	1
Columbia	1917-18	All	Robbins & Meyers	R 34	4	R 18	2		
	1919 to 1923	All	Auto-Lite	A 38	4	A 41	2	A 42	1
Comet	1918	All	Dyneto	D 62	2	D 70	2	D 71	1
	1919	All	Dyneto	D 80	2	D 81	2	D 82	1
	1920	All	Wagner	W 65	4	W 61	2	W 61	1
	1920 to 1923	All	Wagner	W 60 or 65	4	W 66	2	W 61	1
Cortland	1923	All	Delco	D 67 or 74	4	D 3	2	D 75	1
Crow-Elkhart	1917	All	Dyneto	D 62	2	D 63	2		
	1918	All	Dyneto	D 62	2	D 70	2	D 71	1
	1919-20	All	Dyneto	D 80	2	D 81	2	D 82	1
	1921 to 1923	All	Dyneto	D 62	2	D 81	2	D 82	1
Cunningham	1917	All	West'g.	W 14	4	W 27	2		
	1918-19	All	West'g.	W 21	4	W 52	2	W 53	1
	1920 to 1923	All	Delco	D 67 or 74	4	D 87	2	D 87	1
Daniels	1917-18	All	West'g.	W 21	4	W 27	2		
	1919	All	West'g.	W 21	4	W 52	2	W 53	1
	1920 to 1923	All	Delco	D 84	4	D 3	2	D 75	1
Davis	1917 to 1919	All	Delco	D 67 or 74	4	D 32	2	D 11	1
	1920 to 1923	Most models	Delco	D 67 or 74	4	D 3	2	D 75	1
	1923	Late model	Delco	D 67 or 74	4	D 32	2	D 90	1
Dixie-Flyer	1917-18	All	Dyneto	D 62	2	D 70	2	D 71	1
	1919	All	Dyneto	D 80	2	D 81	2	D 82	1
	1920 to 1923	All	Dyneto	D 62	2	D 81	2	D 82	1
Dodge	1917 to 1923	All	North East	Motor-Gen.		N 4	2	N 5	1
Dorris	1917	All	West'g.	W 21	4	W 9	2		
	1918 to 1920	All	West'g.	W 21	4	W 52	2	W 53	1
	1921 to 1923	All	West'g.	W 50	4	W 52	2	W 53	1
Dort	1917	All	West'g.	W 56	2	W 27	2	W 33	1
				W 32	2				
	1918	All	West'g.	W 21	4	W 52	2	W 53	1
	1919-20	All	West'g.	W 50	4	W 52	2	W 53	1
	1921-22	All	If West'g.	W 62	4	W 63	2	W 64	1
			If Gray & Davis	G 32	4	G 33	2	G 33	1
			If Bosch	B 50	4	B 57	2	B 58	1
	1923	All	Bosch	B 50	4	B 57	2	B 58	1
Dupont	1921-22	All	West'g.	W 50	4	W 52	2	W 53	1
Durant	1921 to 1923	All	If Auto-Lite GH 1036 Gen.	A 12	4	A 4	2	A 6	1
			If Auto-Lite GJ 4009 Gen.	A 38	4	A 41	2	A 42	1
Duesenberg	1922-23	All	If Delco No. 237 Gen.	D 67 or 74	4	D 87	2	D 87	1
			If Delco No. 242 Gen.	D 67 or 74	4	D 6	2	D 85	1
Earl	1921 to 1923	All	Auto-Lite	A 38	4	A 41	2	A 42	1
Elcar	1917 early	All	Dyneto	D 62	2	D 63	2		
	1917 late-18	All	Dyneto	D 62	2	D 70	2	D 71	1
	1919	All	Dyneto	D 80	2	D 81	2	D 82	1
	1920 to 1923	All	Delco	D 67 or 74	4	D 3	2	D 75	1
Elgin	1917-18	All	Wagner	W 19	4	W 23	2	W 23	1
	1919	All	Wagner	W 57	4	W 23	2	W 23	1
	1920	All	Wagner	W 19	4	W 66	2	W 61	1
	1921	All	West'g.	W 50	4	W 52	2	W 53	1
	1922-23	All	West'g.	W 62	4	W 52	2	W 53	1
Essex	1919	A	If Delco No. 130 motor	D 67 or 74	4	D 3	2	D 75	1
			If Delco No. 161 motor	D 84	4	D 3	2	D 75	1
	1920-21	All	Delco	D 84	4	D 3	2	D 75	1
	1922	All	If Delco	D 84	4	D 3	2	D 75	1
			If Bosch	B 50	4	B 57	2	B 58	1
	1923	All	Bosch	B 50	4	B 57	2	B 58	1
Ford	1919 to 1923	All	If Liberty	L 14	4	L 15	2	L 16	1
			If Ford	F 5	4	F 6	2	F 7	1
Franklin	1917 to 1919	All	Dyneto	Motor-Gen.		D 60	2	D 61	2
	1920-21 early	All	Dyneto	Motor-Gen.		D 79	2	D 61	2
	1921 late	Series 9-B	If Dyneto	Motor-Gen.		D 79	2	D 61	2
			If North East	Motor-Gen.		N 20	2	N 21	1
	1922	Series 9-B	North East	Motor-Gen.		N 20	2	N 21	1
	1922-23	Series 10	North East	N 12	4	N 18	2	N 19	1
Gardner	1920	All	West'g.	W 50	4	W 52	2	W 53	1
	1921	All	West'g.	W 62	4	W 63	2	W 64	1
	1922-23	All	West'g.	W 62	4	W 67	2	W 68	1
Grant	1917-18	All	Wagner	W 19	4	W 23	2	W 23	1
	1919	All	Wagner	W 57	4	W 6	2	W 6	1
	1920	All	If Wagner	W 57	4	W 6	2	W 6	1
			If Bijur	B 29	4	B 53	2	B 54	1
	1921 to 1923	All	Bijur	B 29	4	B 53	2	B 54	1

Motor and Generator Brush Guide—Continued

Car	Year	Model	System	Motor Brush	No. Used	Generator Main Brush	No. Used	Generator Control Brush	No. Used
Gray	1922-23	All	Auto-Lite	A 38	4	A 41	2	A 42	1
Halladay	1917-18	All	West'g.	W 21	4	W 27	2	W 33	1
	1919-20	All	West'g.	W 31	2	W 27	2		
				W 32	2				
Handley-Knight	1921 to 1923	All	Auto-Lite	A 38	4	A 41	2	A 42	1
Hanson	1920 to 1923	All	Delco	D 67 or 74	4	D 3	2	D 75	1
Haynes	1917 to 1920	All	Leece-Neville	L 9	2	L 7	2	L 4 or 10	1
	1921 early	All	Leece-Neville	L 9	2	L 7	2	L 4 or 10	1
	1921 late & 1922 early	All	Leece-Neville	L 9	2	L 19	2	L 20	1
	1922 late-'23	All	Leece-Neville	L 21	4	L 19	2	L 20	1
H. C. S.	1921 to 1923	All	Delco	D 67 or 74	4	D 87	2	D 85	1
Holmes	1917 to 1919	All	Dyneto	Motor-Gen.		D 60	2	D 61	2
	1920 to 1922	All	Dyneto	Motor-Gen.		D 79	2	D 61	2
Hudson	1917 to 1921	All	Delco	D 12	2	D 6	2	D 11	1
	1922	All	If Delco	D 12	2	D 6	2	D 11	1
			If Bosch	B 50	4	B 57	2	B 58	1
	1923	All	Bosch	B 50	4	B 57	2	B 58	1
Huffman	1920	All	Dyneto	D 80	2	D 81	2	D 82	1
	1921-22	All	Dyneto	D 62	2	D 81	2	D 82	1
Hupmobile	1917	All	West'g.	W 21	4	W 27	2		
	1918	All	Bijur	B 29	4	B 5	2	B 7	1
	1919	N	Bijur	B 12	4	B 5	2	B 7	1
	1919	R	Bijur	B 29	4	B 5	2	B 7	1
	1919	Few models	Remy	R 35 or 36	4	R 30	2	R 31	1
	1920	All	West'g.	W 50	4	W 52	2	W 53	1
	1921	All	West'g.	W 62	4	W 52	2	W 53	1
	1922-23	All	West'g.	W 62	4	W 67	2	W 68	1
Jackson	1917	68, 3-48	Auto-Lite	A 10	4	A 5	2		
	1917	3-49, 3-50, 3-34	Auto-Lite	A 12	4	A 6	2	A 6	1
	1919-20	All	Auto-Lite	A 12	4	A 4	2	A 6	1
	1921-22	All	Auto-Lite	A 38	4	A 41	2	A 42	1
Jewett	1922-23	All	Remy	R 61	2	R 58	2	R 58	1
				R 62	2				
Jordan	1917 to 1919	All	Bijur	B 12	4	B 5	2	B 7	1
	1920	All	If Bijur	B 12	4	B 5	2	B 7	1
			If Delco No. 135 Gen.	D 67 or 74	4	D 32	2	D 11	1
			If Delco No. 165 or 180 Gen.	D 67 or 74	4	D 3	2	D 75	1
	1921-22	All	Delco	D 67 or 74	4	D 3	2	D 75	1
	1923	All	Delco	D 67 or 74	4	D 3	2	D 30	1
King-Eight	1917	All	Robbins & Meyers	R 34	4	R 18	2		
	1918-19	All	Bijur	B 12	4	B 5	2	B 7	1
	1920 to 1922	All	If Bijur	B 12	4	B 5	2	B 7	1
			If West'g.	W 50	4	W 52	2	W 53	1
Kissel	1916-17	All	Remy	R 12 or 38	2	R 30	2	R 31	1
				R 32 or 39	2				
	1917-18	All	Remy	R 12 or 38	2	R 5	2	R 16	1
				R 32 or 39	2				
	1918 to 1921	All	Remy	R 35 or 36	4	R 30	2	R 31	1
	1922-23	All	Remy	R 56 or 59	2	R 58	2	R 58	1
				R 57 or 60	2				
Lafayette	1921 to 1923	All	Delco	D 84	4	D 87	2	D 85	1
Leach	1920-21	All	Delco	D 67 or 74	4	D 3	2	D 75	1
	1922	All	Delco	D 67 or 74	4	D 3	2	D 30	1
Lexington	1917	All	West'g.	W 56	2	W 27	2		
				W 32	2				
	1918	All	West'g.	W 21	4	W 52	2	W 53	1
	1919	All	West'g.	W 50	4	W 52	2	W 53	1
	1920 to 1923	All	Gray & Davis	G 32	4	G 33	2	G 33	1
Liberty	1917	10A	Delco	D 26 or 73	4	D 32	2	D 11	1
	1918-19	10B	Delco	D67 or 74	4	D 32	2	D 11	1
	1920-21	All	Wagner	W 19	4	W 6	2	W 6	1
	1922-23	All	Wagner	W 19	4	W 66	2	W 61	1
Lincoln-8	1921 to 1923	All	Delco	D 84	4	D 87	2	D 85	1
Locomobile	1917-18 early	All	West'g.	W 36	4	W 38	2		
	1918 late-'19	All	West'g.	W 21	4	W 52	2	W 53	1
	1920 to 1923	All	West'g.	W 31	4	W 52	2	W 53	1
Lorraine	1920-21	All	West'g.	W 50	4	W 52	2	W 53	1
Maibohm	1917-18	All	Disco	D 68	2	D 69	2		
	1919	All	Wagner	W 57	4	W 23	2	W 23	1
	1920 to 1922	All	Bijur	B 29	4	B 53	2	B 54	1
Marmon	1917	All	Bosch-Rushmore	R 14	4	R 47	2		
	1918	All	Bijur	B 11	4	B 17	2	B 8	1
	1919	All	Bijur	B 11	4	B 17	2		
	1920 to 1923	All	Delco	D 67 or 74	4	D 87	2	D 85	1

Motor and Generator Brush Guide—Continued

Car	Year	Model	System	Motor Brush	No. Used	Generator Main Brush	No. Used	Generator Control Brush	No. Used
Maxwell	1917 to 1919	All	Simms-Huff	Motor-Gen.		S 1	5	S 5	1
	1920-21	All	If Simms-Huff Single unit	Motor-Gen.		S 1	5	S 5	1
			If Simms two unit	S 2	4	S 3	2	S 4	1
			If Auto-Lite	A 38	4	A 41	2	A 42	1
	1922	All	If Simms	S 2	4	S 3	2	S 4	1
			If Auto-Lite	A 38	4	A 41	2	A 42	1
	1923	All	If Simms	S 2	4	S 3	2	S 4	1
			If Auto-Lite	A 38	4	A 41	2	A 42	1
			If Remy	R 63	2	R 58	2	R 58	1
McFarlan	1917-18	All	West'g.	W 36	4	W 27	2		
	1919-20	All	West'g.	W 36	4	W 52	2	W 53	1
	1921 to 1923	All	West'g.	W 31	4	W 52	2	W 53	1
McLaughlin	1917 to 1919	All	Remy	R 35 or 36	4	R 30	2	R 31	1
	1920-21	All	If Remy	R 61	2	R 58	2	R 58	1
				R 62	2				
			If Delco	D 8	1	D 2	2	D 38	1
				D 14	1				
	1922-23	All	Delco	D 8	1	D 2	2	D 38	1
				D 14	1				
Mercer	1917	All	U. S. L.	Motor-Gen.		U 2	8		
	1918-19	All	West'g.	W 36	4	W 52	2	W 53	1
	1920-21	All	West'g.	W 31	4	W 52	2	W 53	1
Merit	1922-23	All	Delco	D67 or 74	4	D 3	2	D 75	1
Meteor	1917 to 1920	All	Delco	D67 or 74	4	D 32	2	D 11	1
	1921 to 1923	All	Delco	D 67 or 74	4	D 3	2	D 75	1
Metz	1917	All	Gray & Davis	G 13	2	G 17	2	G 24	1
	1918-19	All	West'g.	W 21	4	W 52	2	W 53	1
	1920	All	West'g.	W 50	4	W 52	2	W 53	1
	1921	All	Gray & Davis	G 32	4	G 33	2	G 33	1
Miller	1922-23	All	Delco	D 67 or 74	4	D 3	2	D 75	1
Mitchell	1917	All	If Apple-Split.	A 26	4	A 27	2		
			If West'g.	W 21	4	W 27	2		
	1918	All	If Apple-Split.	A 26	4	A 27	2		
			If West'g.	W 21	4	W 52	2	W 53	1
	1917 to 1919	All	If Remy	R 35 or 36	4	R 30	2	R 31	1
	1920 to 1923	All	Remy	R 61	2	R 58	2	R 58	1
				R 62	2				
Moline-Knight	1917	All	Auto-Lite & Wagner	A 10	4	W 6	2	W 6	1
	1918	All	Auto-Lite	A 12	4	A 4	2	A 6	1
	1919	All	Auto-Lite & Wagner	A 10	4	W 6	2	W 6	1
Monroe	1917	Early tour'g	Auto-Lite	A 12	4	A 4	2		
	1917	M-3, M-4	Auto-Lite	A 12	4	A 6	2	A 6	1
	1917	M-5	Auto-Lite	A 10	4	A 6	2		
	1918 to 1921	All	Auto-Lite	A 12	4	A 4	2	A 6	1
	1922	All	Auto-Lite	A 38	4	A 41	2	A 42	1
Moon	1917 to 1919	All	Delco	D 67 or 74	4	D 32	2	D 11	1
	1919	6-36	Wagner	W 19	4	W 23	2	W 23	1
	1920-21	All	If Delco No. 135 Gen.	D 67 or 74	4	D 32	2	D 11	1
			If Delco No. 165 or 180 Gen.	D 67 or 74	4	D 3	2	D 75	1
	1922-23	All	If Delco No. 165 or 241 Gen.	D 67 or 74	4	D 3	2	D 75	1
			If Delco No. 257 Gen.	D 67 or 74	4	D 32	2	D 90	1
Nash	1918-19	All	If Delco	D 67 or 74	4	D 32	2	D 11	1
	1919	All	If Wagner	W 60 or 65	4	W 61	2	W 61	1
	1920-21	All	Wagner	W 60 or 65	4	W 61	2	W 61	1
	1922	All	If Wagner	W 60	4	W 66	2	W 61	1
			If Delco	D 84	4	D 32	2	D 11	1
	1923	All	Delco	D 84	4	D 32	2	D 11	1
National	1917	6 cyl.	West'g.	W 21	4	W 9	2		
	1917	12 cyl.	West'g.	W 31	2	W 27	2		
				W 32	2				
	1918	All	Bijur	B 12	4	B 5	2	B 7	1
	1919	6 cyl.	Bijur	B 12	4	B 5	2	B 7	1
	1919	12 cyl.	Bijur	B 28	4	B 5	2	B 7	1
	1920 to 1922	All	West'g.	W 21	4	W 52	2	W 53	1
Nelson	1917 to 1920	All	U. S. L.	Motor-Gen.		U 9	6		
Oakland	1916-17	50	Delco	D 67 or 74	4	D 32	2	D 23	1
	1917	32-B, 34	If Delco	D 67 or 74	4	D 32	2	D 11	1
	1917 to 1919	34, 34-B	If Remy	R 35 or 36	4	R 30	2	R 31	1
	1920 to 1923	All	Remy	R 56 or 59	2	R 58	2	R 58	1
				R 57 or 60	2				
Oldsmobile	1917 to 1920	All 6 & 8 cyl.	If Delco	D 67 or 74	4	D 32	2	D 11	1
	1917 to 1919	All 6 cyl.	If Remy	R 35 or 36	4	R 30	2	R 31	1
	1921	All 6 & 8 cyl.	If Delco	D 67 or 74	4	D 32	2	D 11	1
	1920 to 1922	All 6 cyl.	If Remy	R 61	2	R 58	2	R 58	1
				R 62	2				
	1921 to 1923	4 cyl.	Auto-Lite	A 12	4	A 4	2	A 6	1
	1922-23	8 cyl.	If Delco No. 167 Gen.	D 67 or 74	4	D 32	2	D 11	1
			If Delco No. 220 Gen.	D 67 or 74	4	D 3	2	D 30	1

Motor and Generator Brush Guide—Continued

Car	Year	Model	System	Motor Brush	No. Used	Generator Main Brush	No. Used	Generator Control Brush	No. Used
Overland	1917	83, 85, 84-4	Auto-Lite	A 10	4	A 6	2		
		75, 75-B	Auto-Lite	A 12	4	A 8	2		
		90, 85-6	Auto-Lite	A 12	4	A 6	2		
		86-6	Auto-Lite	A 10	4	A 5	2		
	1918	90	Auto-Lite	A 12	4	A 4	2	A 6	1
		85-6	Auto-Lite	A 12	4	A 6	2	A 6	1
		89-6	Auto-Lite	A 10	4	A 4	2	A 6	1
	1919	90	Auto-Lite	A 12	4	A 4	2	A 6	1
		4	Auto-Lite	A 38	4	A 41	2	A 42	1
	1920 to 1923	All	Auto-Lite	A 38	4	A 41	2	A 42	1
Owen-Magnetic	1920-21	All	Owen	O 2	4	O 1	6		
				O 3	4				
Packard	1917-18	12 cyl.	Bijur	B 11	4	B 17	2		
	1919-20	12 cyl.	Bijur	B 12	4	B 17	2		
	1921 to 1923	12 cyl.	Bijur	B 12	4	B 17	2		
		6 cyl.	Atwater Kent	A 48	4	A 49	2	A 50	1
Paige	1917-18	All	If Gray & Davis	G 13	2	G 17	2	G 24	1
			If Remy	R 35 or 36	4	R 30	2	R 31	1
	1919-20	All	Gray & Davis	G 32	4	G 33	2	G 33	1
	1921 to 1923	All	Remy	R 61	2	R 58	2	R 58	1
				R 62	2				
Parker	1923	All	Delco	D 67 or 74	4	D 3	2	D 75	1
Patterson	1917 to 1919	All	Delco	D 67 or 74	4	D 32	2	D 11	1
	1920	All	If Delco No. 105 Gen.	D 67 or 74	4	D 32	2	D 11	1
			If Delco No. 165 Gen.	D 67 or 74	4	D 3	2	D 75	1
	1921 to 1923	All	Delco	D 67 or 74	4	D 3	2	D 75	1
Peerless	1917 early	All	Gray & Davis	G 13	2	G 17	2	G 24	1
	1917 late	All	Auto-Lite	A 12	4	A 4	2	A 6	1
	1918 to 1921	All	Auto-Lite	A 12	4	A 4	2	A 6	1
	1922	All	If Auto-Lite ME 1035 starter	A 12	4	A 4	2	A 6	1
			If Auto-Lite MG 1025 starter	A 38	4	A 4	2	A 6	1
	1923	All	Delco	D 67 or 74	4	D 32	2	D 11	1
Pierce-Arrow	1917 to 1919	All	West'g.	W 36	4	W 9	2		
	1920	All	West'g.	W 31	4	W 52	2	W 53	1
	1921 to 1923	All	If Delco No. 192 Gen.	D 84	4	D 87	2	D 85	1
			If Delco No. 238 Gen.	D 84	4	D 6	2	D 85	1
Pilot	1917 to 1920	All	Delco	D 67 or 74	4	D 32	2	D 11	1
	1921-22	All	Bijur	B 12	4	B 53	2	B 54	1
Premier	1917 to 1920	All	Delco	D 67 or 74	4	D 32	2	D 11	1
	1921 to 1923	All	Delco	D 67 or 74	4	D 3	2	D 75	1
R. & V. Knight	1920-21	All	Wagner	W 60 or 65	4	W 61	2	W 61	1
	1922-23	6 cyl.	Wagner	W 60 or 65	4	W 66	2	W 61	1
	1922-23	4 cyl.	Auto-Lite	A 38	4	A 41	2	A 42	1
Reo	1917-18	All	Remy	R 12 or 38	2	R 30	2	R 31	1
				R 32 or 39	2				
	1919	All	If Remy	R 12 or 38	2	R 30	2	R 31	1
				R 32 or 39	2				
			If North East	N 12	4	N 17	2	N 17	1
	1920-21 early	All	North East	N 12	4	N 17	2	N 17	1
	1921 late-23	All	North East	N 12	4	N 18	2	N 19	1
Revere	1919	All	North East	N 12	4	N 4	2	N 5	1
	1920	All	West'g.	W 21	4	W 52	2	W 53	1
	1921	All	West'g.	W 31	4	W 52	2	W 53	1
	1922-23	All	Bosch	B 50	4	B 51	2	B 52	1
Rickenbacker	1922	A	Simms	S 6	4	S 7	2	S 8	1
	1923	B	Bosch	B 50	4	B 57	2	B 58	1
Riddle	1917 to 1920	All	Delco	D 67 or 74	4	D 32	2	D 11	1
	1921 to 1923	All	Delco	D 67 or 74	4	D 3	2	D 75	1
Roamer	1917 to 1919	All	Bijur	B 12	4	B 5	2	B 7	1
	1920 early	All	Bijur	B 12	4	B 5	2	B 7	1
	1920 late	All	West'g.	W 21	4	W 52	2	W 53	1
	1921	D-4-75	Bijur	B 12	4	B 53	2	B 54	1
	1921	C-6-75	West'g.	W 31	4	W 52	2	W 53	1
	1922	6-45-E	Bijur	B 12	4	B 53	2	B 54	1
	1922	4-75-E	West'g.	W 50	4	W 52	2	W 53	1
Saxon	1917 to 1920	All	Wagner	W 19	4	W 23	2	W 23	1
	1921 early	Duplex	Wagner	W 19	4	W 66	2	W 61	1
	1921 late	Duplex	Wagner	W 19	4	W 66	2	W 61	1
	1922	All	Wagner	W 19	4	W 66	2	W 61	1
Sayers-Scoville	1917 to 1919	All	Delco	D 67 or 74	4	D 32	2	D 11	1
	1920	All	If Delco No. 105 or 135 Gen.	D 67 or 74	4	D 32	2	D 11	1
			If Delco No. 165 Gen.	D 67 or 74	4	D 3	2	D 75	1
	1921 to 1923	All	Delco	D 67 or 74	4	D 3	2	D 75	1

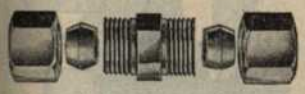
Motor and Generator Brush Guide—Continued

Car	Year	Model	System	Motor Brush	No. Used	Generator Main Brush	No. Used	Generator Control Brush	No. Used
Scripps-Booth	1917	4 cyl.	If Wagner	W 19	4	W 23	2	W 23	1
			If Remy	R 35 or 36	4	R 30	2	R 31	1
	1918-19	All	Remy	R 35 or 36	4	R 30	2	R 31	1
	1920 to 1922	All	Remy	R 56 or 59	2	R 58	2	R 58	1
				R 57 or 60	2				
Seagrave	1919 to 1921	All	Delco	D 67 or 74	4	D 32	2	D 11	1
	1922-23	All	Delco	D 67 or 74	4	D 3	2	D 75	1
Sheridan	1921	All	Auto-Lite	A 12	4	A 4	2	A 6	1
Standard	1917	F	Apple-Splitdorf	A 26	4	A 27	2		
	1917	E	West'g.	W 34	4	W 27	2		
	1918	E & G	West'g.	W 34	4	W 27	2		
	1919	All	West'g.	W 21	4	W 52	2	W 53	1
	1920 to 1922	All	West'g.	W 50	4	W 52	2	W 53	1
Star	1922-23	All	Auto-Lite	A 38	4	A 41	2	A 42	1
Stearns-Knight	1917	All	If West'g.	W 21	4	W 9	2		
			If Remy	R 11 or 40	2	R 5	2	R 16	1
				R 33 or 41	2				
	1918	All	If West'g.	W 34	4	W 9	2		
			If Remy	R 35 or 36	4	R 30	2	R 31	1
	1919 to 1921	All	West'g.	W 50	4	W 52	2	W 53	1
	1922	All	West'g.	W 50	4	W 67	2	W 68	1
Stephens	1917 early	All	Auto-Lite	A 12	4	A 6	2		
	1917 late-19	All	Delco	D 67 or 74	4	D 32	2	D 11	1
	1920 to 1923	All	Auto-Lite	A 38	4	A 41	2	A 42	1
Studebaker	1917 to 1919	All	Wagner	W 19	4	W 6	2	W 6	1
	1920 early	All	Wagner	W 19	4	W 6	2	W 6	1
	1920 late	All	Wagner	W 19	4	W 61	2	W 61	1
	1920	All	If Remy	R 56 or 59	2	R 58	2	R 58	1
				R 57 or 60	2				
	1921 to 1923	All	If Wagner	W 60 or 65	4	W 66	2	W 61	1
			If Remy	R 56 or 59	2	R 58	2	R 58	1
				R 57 or 60	2				
Stutz	1917 to 1920	All	Remy	R 19	4	R 2 or 26	2	R 1 or 29	1
	1921-22	All	Remy	R 56 or 59	2	R 2 or 26	2	R 1 or 29	1
				R 57 or 60	2				
	1923	4 & 6 cyl.	Remy	R 56 or 59	2	R 2 or 26	2	R 1 or 29	1
				R 57 or 60	2				
Templar	1917-18	All	Remy	R 35 or 36	4	R 30	2	R 31	1
	1919 early	All	Remy	R 35 or 36	4	R 30	2	R 31	1
	1919 late	All	Bijur	B 12	4	B 5	2	B 7	1
	1920 early	All	Bijur	B 12	4	B 5	2	B 7	1
	1920 late	All	Bijur	B 12	4	B 53	2	B 54	1
	1921 to 1923	All	Bijur	B 12	4	B 53	2	B 54	1
Tulsa	1920	All	Dyneto	D 80	2	D 81	2	D 82	1
	1921-22	All	Dyneto	D 62	2	D 81	2	D 82	1
Velie	1917	24-27	Remy	R 12 or 38	2	R 5	2	R 16	1
				R 32 or 39	2				
	1917-18	28-38	Remy	R 11 or 40	2	R 5	2	R 16	1
				R 33 or 41	2				
	1917 to 1919	6-39	Remy	R 35 or 36	4	R 30	2	R 31	1
	1918	6-39	Remy	R 11 or 40	2	R 5	2	R 16	1
				R 33 or 41	2				
	1919	All	If Bijur	B 12	4	B 5	2	B 7	1
	1919-20	6-38	Remy	R 35 or 36	4	R 30	2	R 31	1
	1920	6-48 early	Bijur	B 12	4	B 5	2	B 7	1
		6-48 late	Bijur	B 12	4	B 53	2	B 54	1
		6-34	West'g.	W 50	4	W 52	2	W 53	1
	1921 to 1923	All	If Bijur	B 12	4	B 53	2	B 54	1
			If West'g.	W 50	4	W 52	2	W 53	1
Westcott	1917 to 1920	All	Delco	D 67 or 74	4	D 32	2	D 11	1
	1920 to 1923	All	Delco	D 67 or 74	4	D 3	2	D 75	1
	1923	All	If Delco No. 258 Gen.	D 67 or 74	4	D 32	2	D 90	1
Wills-St. Claire	1921 to 1923	All	Delco	D 84	4	D 87	2	D 85	1
Willys-Knight	1917	88-4, 88-6	Auto-Lite	A 10	4	A 5	2		
		88-8	Auto-Lite	A 12	4	A 6	2		
	1918	88-4	Auto-Lite	A 12	4	A 5	2		
		88-8, 89-6	Auto-Lite	A 10	4	A 6	2	A 6	1
	1919	88-4, 84	Auto-Lite	A 10	4	A 5	2		
		86	Auto-Lite	A 12	4	A 5	2		
	1920 to 1923	All	Auto-Lite	A 38	4	A 41	2	A 42	1
Winton	1917 to 1921	All	West'g.	B 26	2	B 3 or 17	2		
				B 27	2				
	1922	All	If West'g.	B 26	2	B 3 or 17	2		
				B 27	2				
			If Delco	D 67 or 74	4	D 3	2	D 75	1
	1923	All	Delco	D 67 or 74	4	D 3	2	D 75	1

These guides are made as complete and correct as possible from information we now have on hand, but are necessarily incomplete, and their exact accuracy cannot be guaranteed.

Imperial Compression Couplings

For Connecting Brass and Copper Tubing.



Imperial Compression Couplings are the quickest and most effective means of connecting up tubing for Gasoline, Oil and Air lines. Their adoption as standard by many leading manufacturers is due to ease of installation—nc soldering, flaring or threading being necessary—and the fact that they make up absolutely tight. The only tools required are two wrenches. Simply insert end of the tubing through the nut and the sleeve, as shown in illustration herewith, and then insert tubing into body of fitting so that end of tube seats. Next tighten up the nut on the fitting. The double grip of the sleeve on the tubing thus obtained makes an absolutely tight joint.

No. 60F Nuts

No. 61F Sleeves

Size, inches	3/16	1/4	5/16	3/8
No. 60-F—Nuts. Each,	.02	.02	.02	.03
No. 61-F—Sleeves. Each,	.04½	.05½	.06½	.08

No. 62F Union

No. 66F Bushing

No. 67F Bushing

Tubing both ends.

Size Tubing, inches	3/16	1/4	5/16	3/8
No. 62F—Union. Each	.24	.24	.30	.36

Tubing one end, pipe thread on other end.

Size Tubing, inches	3/16	1/4	5/16	3/8
Pipe thread, inches	1/8	1/8	1/8	1/8
No. 66F—Bushing. Each	.18	.18	.22	.28

Tubing one end, pipe thread on other end.

Size Tubing, inches	3/16	1/4	5/16	3/8
Pipe thread, inches	1/4	1/4	1/4	1/4
No. 67F—Bushing. Each	.24	.26	.28	.34

No. 68F Connector

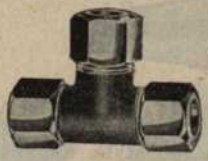
No. 63F Check Valve

Tubing one end, pipe thread on other end.

Size Tubing, inches	3/16	1/4	1/4	5/16	5/16	3/8
Pipe thread, inches	1/8	1/8	1/4	1/8	1/4	1/4
No. 68F—Connector. Each	.16	.16	.18	.20	.20	.25

Tubing one end, pipe thread on other end.

Size Tubing, inches	3/16	1/4	5/16	3/8
Pipe thread, inches	1/8	1/8	1/8	1/4
No. 63F—Check Valve. Each	.26	.26	.28	.34



No. 64F Tees

No. 71F Tees

Tubing on all three ends.

Size tubing, inches	3/16	1/4	5/16	3/8
No. 64F—Tees. Each	.34	.34	.40	.56

Tubing on two ends, pipe thread on one end.

Size tubing, inches	3/16	1/4	5/16	3/8
Pipe thread, inches	1/8	1/8	1/8	1/4
No. 71F—Tees. Each	.28	.32	.40	.48

No. 72F Tees.

Tubing on run, pipe thread on outlet.

Size tubing, inches	3/16	1/4	5/16	3/8
Pipe thread, inches	1/8	1/8	1/8	1/4
No. 72F—Tees. Each	.28	.32	.40	.48

No. 65F Elbows

No. 70F Elbows

Tubing on both ends.

Size tubing, inches	3/16	1/4	5/16	3/8
No. 65F—Elbows. Each	.24	.24	.29	.38

Tubing on one end, female thread on other end.

Size tubing, inches	3/16	1/4	5/16	3/8
Pipe thread, inches	1/8	1/8	1/8	1/4
No. 70F—Elbows. Each	.20	.20	.24	.28

No. 69F Elbows

No. 73F Elbow Check Valve

Tubing on one end, male pipe thread on one end.

Size tubing, inches	3/16	1/4	1/4	5/16	5/16	3/8
Pipe thread, inches	1/8	1/8	1/4	1/8	1/4	1/4
No. 69F—Sleeves. Each	.19	.19	.21	.22	.24	.28

Tubing on one end, pipe thread on one end.

Size tubing, inches	3/16	1/4	5/16	3/8
Pipe thread, inches	1/8	1/8	1/8	1/4
No. 73F—Elbow Check Valve. Ea.,	.28	.32	.40	.48

Imperial Compression Coupling Assortment

These couplings are of the 3-piece type. This assortment is arranged for garages and dealers, with compartments and illustrated index, making the fittings instantly available and consisting of the following:

12 No. 60F ¼-inch Sleeves
12 No. 60F 5/16-inch Sleeves
3 No. 62F ¼-inch Unions
3 No. 62F 5/16-inch Unions
3 No. 64F ¼-inch Tees
3 No. 64F 5/16-inch Tees
3 No. 65F ¼-inch Elbows
3 No. 65F 5/16-inch Elbows
3 No. 66F ¼-inch Bushings
3 No. 66F 5/16-inch Bushings
8 No. 68F ¼-inch Connectors
8 No. 68F 5/16-inch Connectors
8 No. 69F ¼-inch Elbows
8 No. 69F 5/16-inch Elbows
3 No. 70F ¼-inch Elbows
3 No. 70F 5/16-inch Elbows
3 No. 72F ¼-inch Tees
3 No. 72F 5/16-inch Tees

Size of case, 17x9½x2 in. Net wt., 5½ lbs.

No. 110F.....Each, $15.50

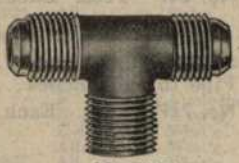
Imperial S. A. E. Flared Tube Couplings

This cut shows Tubing connected with two 41-F S. A. E. Nuts and a 42-F S. A. E. Union.

Made strictly in accordance with the style, dimensions and threading adopted as standard by the Society of Automotive Engineers, and used exclusively by many of the largest car, truck, tractor, airplane and motor boat manufacturers for connecting brass and copper tubing.

No. 41F Union Nuts

No. 44F Three-Way Tees



No. 45F Three-Way Tees

No. 42F Union Coupling

No. 46F and 47F Couplings

No. 49F Elbows

No. 43F Ball Check Valves

No. 48F Half Union Couplings

No.	O. D. tube, inches	S. A. E. thread size	Length over all, inches	Each
41F—Union Uuts	1/4	7/16x20	1 5/16	.11
41F—Union Nuts	5/16	1/2x20	1 1/8	.15
41F—Union Nuts	3/8	5/8x18	1 1/16	.23
42F—Union Couplings	1/4	7/16x20	1 3/16	.20
42F—Union Couplings	5/16	1/2x20	1 11/32	.24
42F—Union Couplings	3/8	5/8x20	1 1/2	.30
43F—Ball Check Valves	1/4	7/16x20	1 3/16	.23
43F—Ball Check Valves	5/16	1/2x20	1 5/32	.26
43F—Ball Check Valves	3/8	5/8x18	1 5/16	.35
44F—Three-Way Tees	1/4	7/16x20	1 3/4	.18
44F—Three-Way Tees	5/16	1/2x20	1 7/8	.23
44F—Three-Way Tees	3/8	5/8x18	2	.33
45F—Three-Way Tees	1/4	7/16x20	1 3/4	.16
45F—Three-Way Tees	5/16	1/2x20	1 7/8	.20
45F—Three-Way Tees	3/8	5/8x18	2	.29
46F—Couplings	1/4	7/16x20	...	.15
46F—Couplings	5/16	1/2x20	...	.15
46F—Couplings	3/8	5/8x18	...	.26
47F—Couplings	1/4	7/16x20	...	.18
47F—Couplings	5/16	1/2x20	...	.20
47F—Couplings	3/8	5/8x18	...	.35
48F—Half Union Couplings	1/4	7/16x20	1 1/16	.12
48F—Half Union Couplings	5/16	1/2x20	1 3/32	.14
48F—Half Union Couplings	3/8	5/8x18	1 5/16	.23
49F—Elbows	1/4	7/16x20	7/8	.11
49F—Elbows	5/16	1/2x20	15/16	.14
49F—Elbows	3/8	5/8x18	1	.21

Drain Cocks

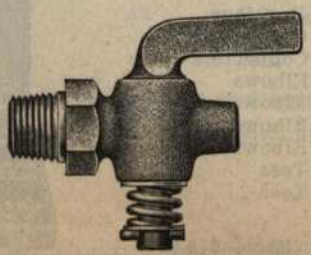
FOR RADIATORS.

Made entirely of brass. Shank has iron pipe thread.

No. 600A, 1/8-inch shank.....Each, $0.40

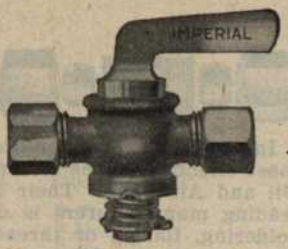
No. 600AA, 1/4-inch shank.....Each, $0.44

No. 600B—1/8-inch extra long shank.....Each, $0.50



Shut-Off Cocks

Nos. 27-EF, 29-EF, 57-EF



Nos. 28-EF, 30-EF, 58-EF

Bright Dipped Finish.

No. 27-EF—Shut-Off Cock, 1/4-inch O. D. Tubing x 1/8-inch I. P. T.....Each, .80

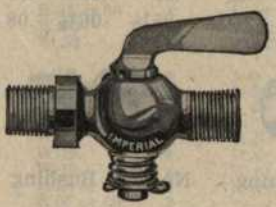
No. 29-EF—Shut-Off Cock, 5/16-inch O. D. Tubing x 1/8-inch I. P. T.....Each, .82

No. 57-EF—Shut-Off Cock, 3/8-inch O. D. Tubing x 1/4-inch I. P. T.....Each, .86

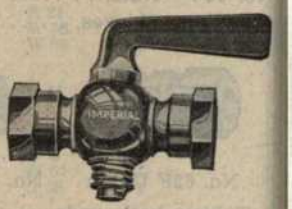
No. 28-EF—Shut-Off Cock, 1/4-inch O. D. Tubing.Each, .86

No. 30-EF—Shut-Off Cock, 5/16-inch O. D. Tubing.Each, .86

No. 58-EF—Shut-Off Cock, 3/8-inch O. D. Tubing.Each, .93



No. 76-E



Nos. 31-E and 32-E

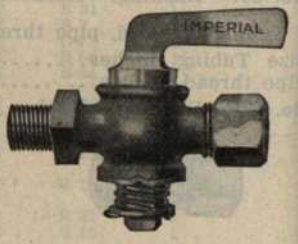
Polished Brass Finish.

No. 76-E—Shut-Off Cock, 1/8-in. I. P. T., Male...Each, .54

No. 31-E—Shut-Off Cock, 1/8-in. I. P. T., Female.Each, .61

No. 32-E—Shut-Off Cock, 1/4-in. I. P. T., Female.Each, .67

Nos. 48-E and 49-E



No. 75-E

Polished Brass Finish.

No. 48-E —Shut-Off Cock, 1/8-in. I. P. T., Male and Female.....Each, .61

No 49-E —Shut-Off Cock, 1/4-in. I. P. T., Male and Female.....Each, .67

No. 75EF—Shut-Off Cock, 5/16-in. O. D. Tubing x 1/8-in. I. P. T., Male.....Each, .46

No. 87-E

No. 39-E

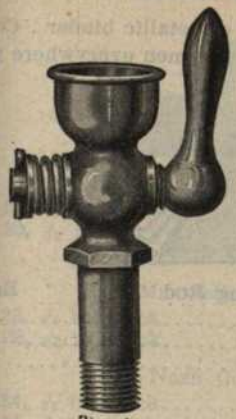
Bright Dipped Finish.

No. 87-E—Shut-Off Cock, 1/8-in. I. P. T., Male...Each, .74

No. 39-E—Shut-Off Cock, 1/4-in. I. P. T., Female.Each, 1.02

I. P. T. indicates Iron Pipe Thread measurement.

Brass Priming Cups



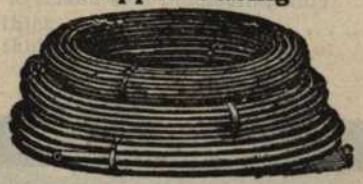
No.	Thrd., Ins.	Each
141C00	⅛	.70
141C1	¼	.90

No.	Thrd., Ins.	Each
142C00	⅛	.65
142C1	¼	.85

No.	Thrd., Ins.	Each
146C0	⅛	.95
146C1	¼	1.05

No.	Thrd., Ins.	Each
145C0	⅛	1.00
145C1	¼	1.10

Copper Tubing



No. 20 gauge soft copper tubing for gas lines, etc.

Outside diam.	Approx. wt. per 100 ft.	Per lb.	Outside diam.	Approx. wt. per 100 ft.	Per lb.
⅛ in.	3 lbs.	$1.90	5/16 in.	11 lbs.	$1.26
7/32 in.	6½ lbs.	$1.50	⅜ in.	14½ lbs.	$1.20
¼ in.	8½ lbs.	$1.32	½ in.	19¾ lbs.	$1.14

Approximately 12 ft. in a coil.

Flexible Tubing

This is used from exhaust pipe to Carburetor. Made of galvanized steel and packed with the very best grade of asbestos packing.

No.	Diameter, ins. Inside	Outside	Per ft.
911	23/32	⅞	.40
912	⅞	1 1/32	.48
913	29/32	1 1/16	.50
914	1 1/16	1¼	.55
915	1⅛	1 5/16	.58
916	1¼	1 7/16	.62
917	1 5/16	1½	.65
918	1½	1 11/16	.75
919	1¾	1 13/16	.90
920	1 13/16	2	.95
921	2	2 1/16	1.00
922	2 1/16	2¼	1.10

Imperial Brass Pipe Fittings

Iron Pipe Thread.
Rough Bright Brass Finish.

No. 100-B Elbow

No. 101B Tee

No. 102-B Cross

No. 103-B Coupling

No. 104-B Union

No. 108-B Cap

No. 109-B Plug

No. 110-B Bushing

No. 111-B Lock Nut

No. 112-B Close Nipple

No. 113-B Long Nipple

No. 116-B Street Elbow

No.	Size ⅛-in. Each	Size ¼-in. Each
100-B—Elbows	.12	.15
101-B—Tees	.17	.21
102-B—Crosses	.25	.30
103-B—Couplings	.10	.13
104-B—Unions	.40	.50
108-B—Caps	.10	.13
109-B—Plugs	.08	.10
110-B—Bushings	...	.10
111-B—Lock Nuts	.10	.10
112-B—Close Nipples	.11	.13
113-B—Nipples, length 1½ inches	.13	.16
113-B—Nipples, length 2 inches	.15	.19
113-B—Nipples, length 2½ inches	.17	.22
113-B—Nipples, length 3 inches	.19	.25
113-B—Nipples, length 3½ inches	.21	.28
116-B—Street Elbows	.25	.27

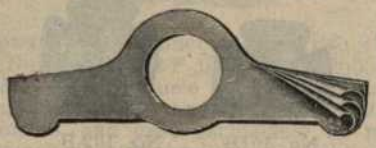
Float for Vacuum Tank

This Float is used to replace defective floats on Standard Vacuum Tanks now in use. Made of copper, nickel-plated, and due to the construction and material used it has perfect buoyancy, long life, and is guaranteed not to leak. Packed in individual cartons. Weight 3 ounces.

No. 32501 ..... Each, $0.65

Laminated Shims

Laminated Shims are composed of layers of hard shim brass, .003 in. thick, joined together by a metallic binder . Compare peeling one Laminated Shim to fussing with many loose-leaf shims or filing a solid shim. Service men everywhere use Laminated Shims. Packed 25 in a box.



Buick Model 45 Connecting Rod. Each

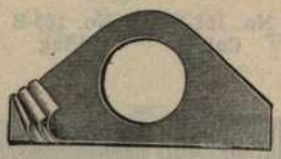
No. 23, 1/64 in. thick ..... .05
No. 23, 1/32 in. thick ..... .07

1917-'23 Models, inclusive.

Buick Model 35 Connecting Rod. Each

No. 24, 1/64 in. thick ..... .05
No. 24, 1/32 in. thick ..... .07

1917-'23 Models, inclusive.

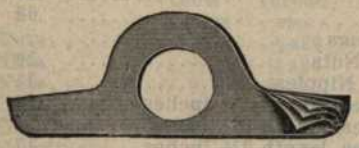


Chalmers Connecting Rod. Each

No. 53, 1/64 in. thick ..... .05
No. 53, 1/32 in. thick ..... .07

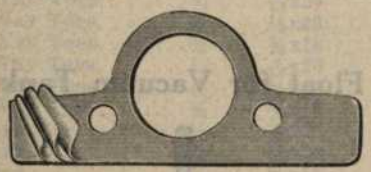
Chevrolet F. B. Connecting Rod. Each

No. 30, 1/64 in. thick ..... .04
No. 30, 1/32 in. thick ..... .06



Chevrolet Four-Ninety Connecting Rod Each

No. 31, 1/64 in. thick ..... .04
No. 31, 1/32 in. thick ..... .06



Continental N Connecting Rod. Each

No. 42, 1/64 in. thick ..... .05
No. 42, 1/32 in. thick ..... .07

Continental 9-N Connecting Rod. Each

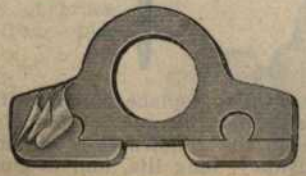
No. 43, 1/64 in. thick ..... .05
No. 43, 1/32 in. thick ..... .07

Continental 7-N Connecting Rod. Each

No. 41, 1/64 in. thick ..... .04
No. 41, 1/32 in. thick ..... .06

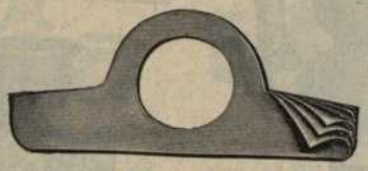
Continental 7-W Connecting Rod. Each

No. 40, 1/64 in. thick ..... .04
No. 40, 1/32 in. thick ..... .05



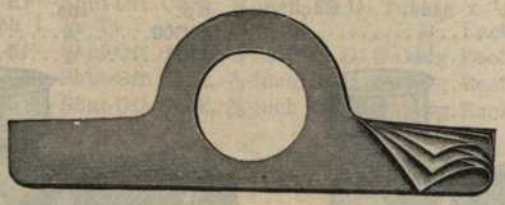
Continental 7-R Connecting Rod. Each

No. 44, 1/8 in. thick, Babbitted ..... .25



Dodge Connecting Rod. Each

No. 15, 1/64 in. thick ..... .05
No. 15, 1/32 in. thick ..... .07
No. 15, 1/8 in. thick ..... .16



Dodge Front Bearing. Each

No. 16, 1/64 in. thick ..... .06
No. 16, 1/32 in. thick ..... .08
No. 16, 1/8 in. thick ..... .18

Dodge Center Bearing. Each

No. 17, 1/64 in. thick ..... .06
No. 17, 1/32 in. thick ..... .08
No. 17, 1/8 in. thick ..... .18

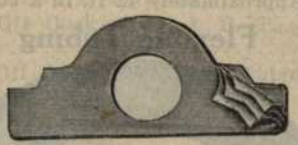
Dodge Rear Bearing. Each

No. 18, 1/64 in. thick ..... .06
No. 18, 1/32 in. thick ..... .08
No. 18, 1/8 in. thick ..... .18

Essex Connecting Rod. Each

No. 19, 1/64 in. thick ..... .04
No. 19, 1/32 in. thick ..... .06

1918-23 Models, inclusive.



Ford Connecting Rod. Each

No. 14, 1/64 in. thick ..... .05
No. 14, 1/32 in. thick ..... .06

Ford Front and Center Bearing. Each

No. 12, 1/64 in. thick ..... .06
No. 12, 1/32 in. thick ..... .09

Ford Rear Bearing. Each

No. 11, 1/64 in. thick ..... .08
No. 11, 1/32 in. thick ..... .13

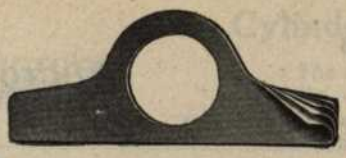
Fordson Tractor Connecting Rod. Each

No. 35, 1/64 in. thick ..... .06
No. 35, 1/32 in. thick ..... .07

Fordson Tractor Main Bearings. Each

No. 36, 1/64 in. thick ..... .08
No. 36, 1/32 in. thick ..... .10

Laminated Shims—Continued



Hudson Super-Six Connecting Rod. Each

No. 20, 1/4 in. thick..... .04
No. 20, 3/32 in. thick..... .06

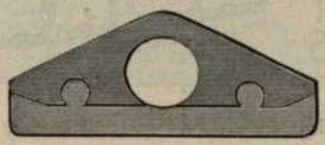
1917-'23 Models, inclusive.

Maxwell Connecting Rod. Each

No. 28, 1/4 in. thick..... .04
No. 28, 3/32 in. thick..... .06

Nash Connecting Rod. Each

No. 34, 1/4 in. thick..... .06
No. 34, 3/32 in. thick..... .08

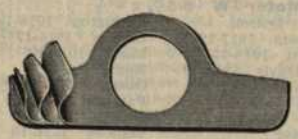


Oakland Connecting Rod. Each

No. 54, 1/8 in. thick, Babbitted..... .20

Oldsmobile 37 Connecting Rod. Each

No. 37, 1/4 in. thick..... .05
No. 37, 3/32 in. thick..... .07

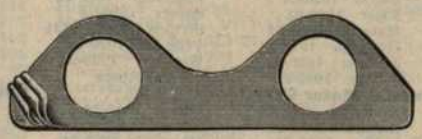


Overland Light Four Connecting Rod. Each

No. 26, 1/4 in. thick..... .04
No. 26, 3/32 in. thick..... .06

Overland 89-6 Connecting Rod. Each

No. 27, 1/4 in. thick..... .05
No. 27, 3/32 in. thick..... .07

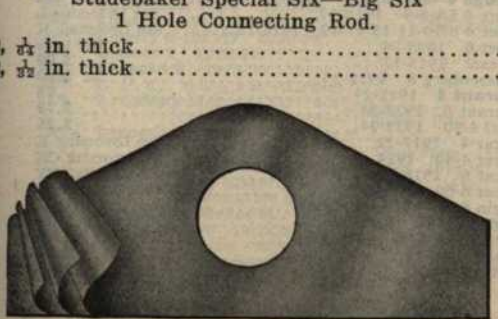


Studebaker Special Six—Big Six.
2 Hole Connecting Rod. Each

No. 51, 1/4 in. thick..... .06
No. 51, 3/32 in. thick..... .08

Studebaker Special Six—Big Six
1 Hole Connecting Rod. Each

No. 50, 1/4 in. thick..... .06
No. 50, 3/32 in. thick..... .08



The Fit-All Shim Shape. Each

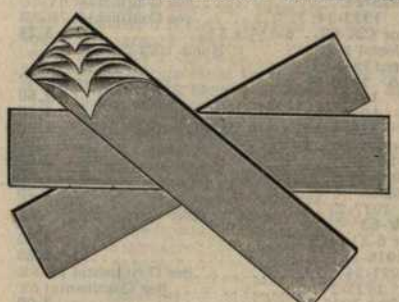
No. 21, 17/32 in. hole, 1/4 in. thick..... .08
No. 22, 13/32 in. hole, 3/32 in. thick..... .12

This Kit is a useful partitioned box containing 250 Assorted Laminated Shims.

Type	Stock No.	Thickness	No. of Sets	No. of Shims
Ford Connecting Rod.	14	1/4 in.	3	24
Ford Connecting Rod.	14	3/32 in.	3	24
Ford Front and Center.	12	1/4 in.	2	8
Ford Rear.	11	1/4 in.	2	4
Dodge Connecting Rod.	15	3/32 in.	2	16
Dodge Connecting Rod.	15	1/8 in.	2	16
Dodge Front.	16	3/32 in.	1	2
Dodge Front.	16	1/8 in.	1	2
Dodge Center.	17	3/32 in.	1	2
Dodge Center.	17	1/8 in.	1	2
Dodge Rear.	18	3/32 in.	1	2
Dodge Rear.	18	1/8 in.	1	2
Fit-All.	21	1/4 in.	1	8
Fit-All.	21	3/32 in.	1	8
Fit-All.	22	1/4 in.	1	8
Fit-All.	22	3/32 in.	1	8
Fordson Connecting Rod. . . .	35	3/32 in.	1	8
Fordson Main Bearing.	36	1/4 in.	1	6
Buick Connecting Rod.	23	3/32 in.	1	12
Chevrolet 490 Con. Rod. . . .	31	3/32 in.	1	8
Chevrolet FB Con. Rod. . . .	30	3/32 in.	1	8
Continental 7-W Con. Rod. . .	40	3/32 in.	1	12
Continental 7-N Con. Rod. . .	41	3/32 in.	1	12
Essex Connecting Rod.	19	3/32 in.	1	8
Hudson Connecting Rod	20	3/32 in.	1	12
Nash Connecting Rod.	34	3/32 in.	1	12
Oldsmobile No. 37 Con. Rod. .	37	3/32 in.	1	8
Overland Light 4 Con. Rod. .	26	3/32 in.	1	8
Strip, 2 x 9 in.		3/32 in.	all .003 in. Laminations	

No. 75—Laminum Kit complete. . . . . Each, 20.00

Laminated Shim Assortments



Consist of three strips of laminated shim stock 2 inches wide and 9 inches long, each layer being .002 of an inch thick.

Packed 12 assortments in case.

Per asst.

No. 3—3 3/32-inch strips. 2.00
No. 5—3 1/4-inch strips. 1.25

Shim Stock

Handy Screw Top Cartons for Shim Stock.

No. 9001—Assortment No. 1, 4 pieces 25x2½, .002, .005, .010 and .015. . . . . Each, .80

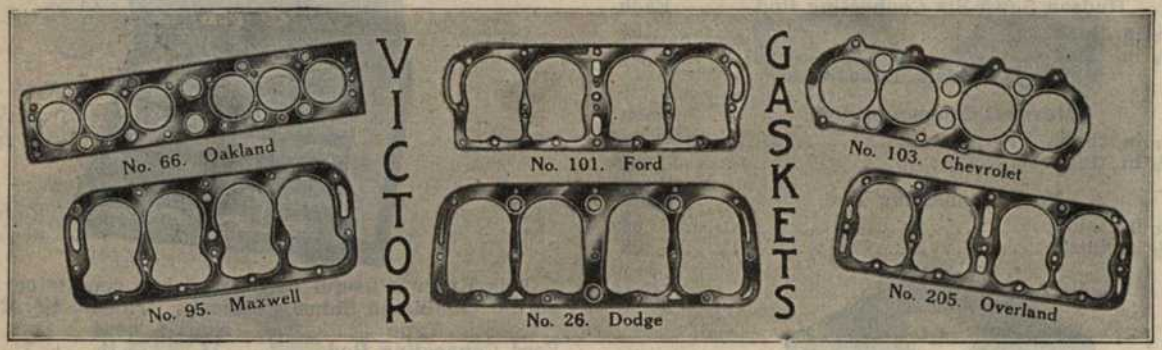
No. 9002—Assortment No. 2, 4 pieces 50x2½, .002, .005, .010 and .015. . . . . Each, 1.30

Cylinder Head Gaskets

VICTOR GASKETS

Made from pure new copper and high grade asbestos strictly to car manufacturers' specifications.

VICTOR GASKETS



Cylinder Head Gaskets for Passenger Cars

Standard Packages contain 10 or 25 (Fords 100). Shipping weight per 100 gaskets in packages:
Average size 4-cylinder gasket.....45 lbs.
Average size 6-cylinder gasket.....65 lbs.

Information on cylinder head gaskets for nearly all models is shown below. The Victor Gasket Guide—copy furnished on request—contains information on models not in wide use. It also contains information on all standard and special small-shaped gaskets.

With a few minor exceptions all Victor gaskets listed hereunder are used in original equipment. The gasket number is stamped on the gasket.

To assist in selecting stock the more commonly used gaskets are shown in bold face.

Victor Number	Name	Model	Year	List Price, Each
63	Abbott 6-44		1916-18	See Continental 7W
381	Ace 4-F		1923-24	See Gray-B
282	Ace 6-L		1921-23	See Herschell
206	Allen		1919-22	$2.25
377	Ambassador		1923-24	See Continental 6T
47	American 6-A-B		1917-19	See Rutenber 25
282	American 6-C		1920-22	See Herschell
63	Anderson 6		1917-19	See Continental 7W
350	Anderson 6-40		1920-24	See Continental 7R-8R
428	Anderson Light 6		1922-24	See Continental 6Y-7U
456	Ansted Motor		1923	1.75
333	Apperson 8		1918-24	1.00
43	Auburn 6-39-40		1915-17	See Teetor H
47	Auburn 6-39		1917	See Rutenber 25
63	Auburn 6-39		1918-19	See Continental 7W
350	Auburn 6-39-51		1920-22	See Continental 7R-8R
428	Auburn 6-43		1923-24	See Continental 6Y-7U
458	Auburn 6-63		1923-24	See Weidely R
6	Austin 12		1917-20	See Weidely C
428	Barley 6		1923-24	See Continental 6Y-7U
350	Bay State 6		1922-24	See Continental 7R-8R
281	Beaver Motor	CK-CL 6-3 1/2 x 5 1/4		3.25
		Colonial 1921	Noma 1922-23	
		Ogren 1921-22		
63	Bour Davis 6		1916-19	See Continental 7W
99	Briscoe 4-38		1916	2.50
251	Briscoe 4-34		1920-21	1.25
379	Buda Motor	MU 4-3 1/8 x 5 1/8 WTU 4-3 3/4 x 5 1/8		2.50
		Checker Mogul Cabs		
51	Buick 4		1916-18	1.00
397	**Buick 4**		1922-24	.60
480	**Buick 6**		1924	1.25
113	**Cadillac 8**		1917-23	(2) .70
469	**Cadillac 8 V-63**		1924	(2) .70
38	Caille Motor	6-3 1/4 x 5		4.00
25	Case 4-T		1916-17	1.80
350	Case 6X		1921-24	See Continental 7R-8R
377	Case 6W-Y		1922-24	See Continental 6T
72	Chalmers 6-32		1915-16	3.00
8	Chalmers 6-35A-B		1917-18	2.00
7	**Chalmers 6-35C**		1917-22	1.90
488	**Chalmers 6**		1923-24	1.85
449	**Chandler 6**		1923-24	1.60
103	**Chevrolet**—all models		1916-24	.50
103A	Same gasket with bolt holes flanged			.52
497	Chrysler 6		1924	1.25
275	**Cleveland 6**		1919-24	1.10
79	Cole 6-60		1915 (Northway 37)	(3) 1.10
64	**Col 8**		1916-24 (Northway 308)	(2) .95
63	Columbia 6		1917-19	See Continental 7W
47	Columbia 6		1919-22	See Rutenber 25
350	Columbia 6		1920-24	See Continental 7R-8R
428	Columbia Light 6		1922-24	See Continental 6Y-7U
107	Commonwealth 4-40-42		1917-22	See Lycoming K
110	Continental Motor	6H 6-3 1/2 x 5 1/4		2.00
		Auburn 44	Paige 46 1915-17	
		Case V 1918-19	Pathfinder 1915-16	
		Overland 82 1915		
9	Continental Motor	6V-7V 6-2 7/8 x 4 1/2		1.25
		Moon 1918-19	Saxon 1915-19	
63	**Continental Motor**	7W 6-3 1/4 x 4 1/2		1.25
		Abbott Detroit	Lexington 1918-19	
		Anderson 1917-19	Liberty 1916-17	
		Auburn 1918-19	Moon 1916-19	
		Bour Davis 1916-19	Noma 1919-20	
		Columbia 1917-20	Overland 85 1917-18	
		Davis 1916-19	Paterson 1916-19	
		Elcar 1918-19	Sayers 1918-19	
		Halladay	Velie 38 1916-19	
		Hanson 1919	Westcott 1916-19	
		Kline 1917-19	Several others	
350	**Continental Motor**	7R 6-3 1/4 x 4 1/2 8R 6-3 3/8 x 4 1/2 6S 6-3 5/16 x 4 3/4		1.10
		Anderson 1920-24	Kline 1920-24	
		Auburn 1920-22	Lexington 1920-21	
		Bay State 1922-24	Moon 1919-24	
		Bour Davis 1920-24	National 51 1923	
		Case X 1921-24	Noma 1921-24	
		Columbia 1920-24	Paterson 1920-24	
		Davis 1920-24	Piedmont 1919-22	
		Elcar 1920-24	Sayers 1920-24	
		Hanson 1920-24	Scripps Booth 1921	
		Huffman 1920-24	Velie 48 1920-24	
		Jackson 1920-22	Westcott 1920-24	
		Jordan 1919-24	Several others	
428	**Continental Motor**	6Y-7U 6-3 1/8 x 4 1/4		1.00
		Anderson 1922-24	Davis 1922-24	
		Auburn 1922-24	Hanson 1922-24	
		Barley 1922-24	Moon 40 1922-24	
		Columbia 1922-24		
377	Continental Motor	8A-9A 3 3/4 x 5 6T 3 3/8 x 5 1/4		2.00
		Ambassador 1923-24	Ogren 1923	
		Case W-Y 1923-24	Paige 1920-24	
		Crawford 1922-24		
385	Courier 6		1923-24	See Falls
377	Crawford 6		1923-24	See Continental 6T
88	Cunningham 8		1917-24	(4) 1.00
377	Dagmar 6		1923-24	See Continental 6T
200	Daniels 8		1920-23	(2) 2.25
63	Davis 6-46		1916-19	See Continental 7W
350	Davis 6-61-67		1920-24	See Continental 7R-8R
428	Davis Light 6-71		1922-24	See Continental 6Y-7U
82	Dixie Flyer 4-L		1917-18	See Lycoming L
220	Dixie Flyer 4		1919	See Herschell 2700
356	Dixie Flyer 4		1920-22	See Herschell 7000
26	**Dodge 4**—all models		1915-24	.52
82	Dort 4	5A-6-9	1916-17	See Lycoming L
107	Dort 4	8-10-11-15-17-19	1918-23	See Lycoming K
385	Dort 6		1923-24	See Falls
37	Drexel		1915-17	3.00
402	Duesenberg 8		1922-24	3.50
401	**Durant 4**		1922-24	.65
393	Durant 6		1922-24	1.75
251	Earl 4-40		1922-24	1.25
107	Elcar 4		1917-22	See Lycoming K
426	Elcar 4-40		1924	See Lycoming CE
63	Elcar 6		1918-19	See Continental 7W
350	Elcar 6-60		1919-24	See Continental 7R-8R
173	Elgin 6 E		1916 (Walker)	2.00
114	Elgin 6-H-K		1917-22	See Falls
201	**Essex 4-A 5-A**		1918-23	1.00
493	Essex 6		1924	1.80
114	**Falls Motor**	6-3 1/8 x 4 1/4	1917-22	1.25
		Elgin 1917-22	Hollier 1917-18	
		Grant 1917-19	Kelsey 1921	
		Halladay 1918-19	Malbohm 1918-22	
		Velie 34 1920-22	Several others	

Cylinder Head Gaskets—Continued

VICTOR GASKETS

The dealer who has gaskets in stock to meet the demand will get the gasket business.

VICTOR GASKETS

Passenger Cars (Continued)

Victor Number	Name	Model	Year	List Price, Each
385	**Falls Motor T 8000** 6-3⅛ x 4¼			1.50
	Courier 1922-24	Handley 1923		
	Dort 1923-24	Parenti 1923		
59	Ferro Motor 8-3 x 3½		(2)	1.80
	Briscoe 1916-17	Jackson 1917-19		
	Economy 1917-18			
101	**Ford 4**—all models 1909-24			.36
101-A	Ford Fibre top Bound Edge			.31
101-B	Ford Fibre top			.29
101-C	Ford all copper bound edge			.38
101-D	Ford Brass Asbestos			.36
495	Flint 6 1924			1.50
328	Frontenac Ford Head			1.25
107	Gardner 4-G 1920-22			
426	Gardner 4 1923-24		See Lycoming K	
436	G. B. & S. Motor S 4-3¼ x 4¼			2.00
	Moore 1918-20	Princess 1916-18		
	Olympia 1917-18	Pullman 1916-18		
	Several other passenger cars and trucks.			
173	Grant 6 T-U 1915-16			2.00
114	Grant 6 G-K 1917-19			
243	Grant 6 H-X 1920-23 (Walker)		See Falls	1.75
414	**Gray 4** 1922-24			.60
381	Gray Beall Motor 4-3½ x 5			1.70
	Ace 1922-24	Saxon 1921-23		
	Kelsey 1922-24			
	Gray Dort		See Dort	
385	Handley 6-40 1923		See Falls T 8000	
350	Hanson 6-54-60 1920-24		See Continental 7R-8R	
428	Hanson Light 6-30 1922-23		See Continental 6Y-7U	
490	Harroun			3.50
46	Haynes 12 1917-22		(2)	2.50
383	Haynes 6-75-77 (Ends) 1922-24		(2)	.75
383-A	Haynes 6-75-77 (Center) 1922-24			.75
387	H. C. S. 4 1920-24			1.60
220	Herschell Spillman Motor 2700 4-3¼ x 5			2.00
	Commonwealth 1920	Dixie Flyer 1919		
356	**Herschell Spillman Motor 7000** 4-3½ x 5			1.80
	Bell 1918-22	Dixie Flyer 1920-22		
	Bush 1919-22	Harvard 1920-22		
	Climber 1920-22	Lorraine 1920-22		
	Commonwealth 1921-22			
	Several other passenger cars and trucks.			
282	Herschell Spillman Motor 11000 6-3¼ x 5			2.25
	Ace 1921-24	Kurtz 1918-24		
	American 1920-24	Pilot 1921-24		
	Birch 1921-22	Raleigh 1920-21		
	Climber 1920-23	Tulsa 1921-22		
	Crow-Elkhart 1922	Winther 1920-22		
	Hatfield 1922-24	Several others.		
7485	Holmes 6 1919-23		(6)	.10
399	**Hudson 6** 1914-24			1.10
350	Huffman 6 1920-24		See Continental 7R-8R	
191	**Hupmobile 4-R** 1917-22			.75
450	**Hupmobile 4** 1923-24			.75
496	Hupmobile 4 1924			.75
36	Interstate 4 1915-17 (Rutenber)			2.50
121	Interstate 4 1918 (Beaver)			2.50
79	Jackson 6-48 1915 (Northway 37)			1.10
35	Jackson 4-34 1916 (Northway 52)			1.80
350	Jackson 6-38 1920-22		See Continental 7R-8R	
13	Jeffery 6-671 1917			2.25
365	**Jewett 6** 1922-24			1.10
350	Jordan 6-M-MX-H 1919-24		See Continental 7R-6S	
6	Kissel 12 1918		(4) See Weidely C	
50	Kissel 6 1917-24			1.60
350	Kline 6 1920-24		See Continental 7R-8R	
455	Lafayette 8 1920-24			1.75
132	Laurel or Roof Head for Ford Motor			1.80
386	Leach 6 1922-24			2.50
268	LeRoi Motor 4-3⅛ x 4½			1.25
	Birch 1920-24	Sterling 1922-23		
	Bowman 1921	Stewart Truck		
	Several other cars, trucks and tractors.			
55	Lewis Motor 6-3½ x 5¼			3.75
63	Lexington 6-R 1918-19		See Continental 7W	
350	Lexington 6-S 1920-21		See Continental 7R	
266	Lexington 6-T 1920-21			2.00
393	**Lexington 6-ST** 1922-24			1.75
63	Liberty 6-10A 1916-17		See Continental 7W	
246	Liberty 6-10C-D 1920-24		(3)	.85
301	Lincoln 8 1920-22		(2)	1.25
470	**Lincoln 8** 1923-24		(2)	1.25
437	L. P. C. 6-3½ x 6 (Lewis)			5.00
34	Lycoming Motor DXU 4-3¼ x 5			1.75
	Crow-Elkhart 1916	Elcar 1917		
82	Lycoming Motor L 4-3¼ x 5			1.70
	Arbenz 1915-17	Dixie Flyer 1917		
	Commonwealth 1918	Dort 1916-17		
	Crow-Elkhart 1916-17	Sphinx 1916		
	Several other cars and trucks.			
107	**Lycoming Motor K** 4-3½ x 5			.85
	Bush 1918-20	Elcar 1917-22		
	Bradley 1921	Piedmont 1917-22		
	Commonwealth 1918-22	Seneca 1922-23		
	Crow-Elkhart 1920-22	Texan 1918-22		
	Dort 1918-22	Tulsa 1918-19		
	Several other cars and trucks.			

Victor Number	Name	Model	Year	List Price, Each
426	**Lycoming Motor 4 Model CE**		1923-24	1.25
	Elcar 1923-24	Seneca 1923-24		
	Gardner 1923-24			
319	McFarlan 6 1917-24		(2)	2.50
	McLaughlin	(See Buick and Oakland)		
114	Maibohm 6 1918-22 (Falls)			1.25
4	Marmon 6-41 1914-16			2.50
109	Marmon 6-34-34B 1917-19			1.60
225	**Marmon 6-34C** 1920-24		(2)	1.00
104	Maxwell 4 1914-15			1.20
95	Maxwell 4 1916-22 (461 can be used)			.50
461	**Maxwell 4** 1916-24			.50
98	Metz 4 1914-19			2.00
185	Mitchell 6 C-E-F-42 1916-21			1.70
186	Mitchell 6 D-E-F-40 1917-21			1.40
441	Mitchell F-50 1922-23			1.50
157	Moline Knight 4 1916-19			.75
45	Monroe 4-M2 1915-17 (Mason)			1.25
44	Monroe 4-M3 1917		See Sterling	
216	Monroe 4-S7-S12 1919-24			1.25
63	Moon 6-30-43-45 1916-18		See Continental 7W	
9	Moon 6-36-38 1918-19		See Continental 7V	
350	Moon 6-48-58 1919-24		See Continental 7R-8R	
428	Moon 6-40 1922-24		See Continental 6Y-7U	
111	**Nash 6** 1918-24			1.10
327	**Nash 4** 1921-24			1.00
192	National 12 1916-19			2.50
350	National 6-51 1923-24		See Continental 8R	
228	National 6 BB 1919-23			2.25
287	Nelson 4 1917-21			1.75
63	Noma 6-A & B 1920		See Continental 7W	
350	Noma 6-C 1921-23		See Continental 7R-8R	
79	Oakland 6-48-49 1914-15 (Northway 37)			1.10
35	Oakland 4-36-37-38 1914-16 (Northway 52)			1.80
64	Oakland 8-50 1916-17 (Northway 308)			.95
66	**Oakland 6-32B-34B-44** 1916-23			.57
473	**Oakland "L" Head 6-54** 1924			1.00
281	Ogren 1921-22		See Beaver	
65	Oldsmobile 4-42-43 1914-16 (Northway 45)			2.00
28	Oldsmobile 8-44 1916			1.60
53	Oldsmobile 8-45-46 1917-23		(2)	1.20
66	Oldsmobile 6-37 1917-21			.57
103	Oldsmobile 4-43A 1921-23			.50
371	**Oldsmobile 8-47** 1921-23		(2)	.60
487	**Oldsmobile 6** 1924			1.00
1	Overland 4-83-85 1916-18			1.50
2	**Overland 4-75-90** 1916-19			.90
205	**Overland 4-91** 1919-23			.60
486	**Overland 4-92** 1923-24			.60
30	Packard 12 2-25-2-35 1916-17			1.25
106	**Packard 12 3-25-3-35** 1918-23			1.25
331	Packard 6 1920-21			1.25
429	**Packard 6** 1922-24			1.25
468	Packard 8 1923-24			1.75
110	Paige 6-46 1915-17		See Continental 6R	
47	Paige 6-38-40 1915-19		See Rutenber 25	
365	Paige 6-42-44 1918-22			1.10
377	**Paige 6-66-70** 1920-24			2.00
52	Partin Palmer 1915-16 (Mason)			2.50
63	Paterson 6-45-49 1916-19		See Continental 7W	
350	Paterson 6-50-52 1920-24		See Continental 7R-8R	
107	Piedmont 4-30 1917-22		See Lycoming K	
350	Piedmont 6-40 1919-22		See Continental 7R	
118	Pierce-Arrow 6-48-51 1916-20		(3)	1.25
375	Pierce-Arrow 6-38 1916-18		(3)	1.25
390	Pierce-Arrow 6-32 1921-24			2.50
43	Pilot 6 1916-20		See Teetor H	
282	Pilot 6-50 1921-23		See Herschell 11000	
3	Premier 6-49 to 51 1914-16			3.75
108	Premier 6 B-C-D 1917-23			3.00
499	Princeton 6, 1924			2.00
62	Pullman 6 1914-16			3.75
328	Rajo Racing Head for Ford Prior 1923			1.25
460	Rajo Racing Head for Ford 1923 Model A			1.25
78	Regal 4-D 1915-16			3.00
29	Regal 8-F 1916-17			2.50
31	Regal 4-J 1917-19			2.50
345	**Reo 6** 1920-24			.75
434	**Rickenbacker 6** 1922-24			1.25
398	R. & V. Knight 4-R 1919-23		(2)	.60
407	R. & V. Knight 6-J 1919-24		(2)	1.00
47	**Rutenber Motor 22-25** 6-3⅛ x 5			1.40
	1915 to 1920—	Geronimo	Pan-American	
	American	Ghent	Roamer	
	Auburn	Jeffery	Waltham	
	Bush	Marion Handley	Several others.	
	Columbia	Paige		
54	Saxon 4 1914-17 (Cont. OA)			.90
9	Saxon 6 1916-19		See Continental 7V	
315	Saxon 4 Duplex 125 1920-21 (R. & V. OS)			1.60
381	Saxon 4 Duplex 125G 1921-23		See Gray B	
63	Sayers 6 1918-19		See Continental 7W	
350	Sayers 6 1920-24		See Continental 7R-8R	
44	Scripps Booth 4-C 1915-17		See Sterling	
70	Scripps Booth 8-D 1916-18 (Ferro)		(2)	1.25
103	Scripps Booth 4-G 1917-19			.50
66	Scripps Booth 6-39-42 1919-21			.57
350	Scripps Booth 6-43-46 1921		See Continental 7R	
103	Sheridan 4 1921		See Chevrolet	
425	**Star** 1922-24			.50
384	Stearns-Knight 4 1918-24		(2)	.90

Cylinder Head Gaskets—Continued

VICTOR GASKETS

Motor overhauling is better done when new gaskets are used throughout. There is a Victor gasket for every need.

VICTOR GASKETS

Passenger Cars (Continued)

Victor Number	Name	Model	Year	Motor	List Price, Each
84	Stephens	6-70-80-90	1917-22		$1.50
417	Stephens	6-90	1922-24		1.20
410	Studebaker	4-SF	1918-19		1.25
190	**Studebaker Big 6**		1918-24		1.25
252	**Studebaker Special 6**		1919-24		1.25
297	**Studebaker Light 6**		1920-22		1.00
465	**Studebaker Light 6**		1923-24		1.00
406	Stutz	4	1922-24		2.50
458	Stutz	Special 6	1923-24		1.75
520	Stutz	Speedway 6	1924		1.75
33	Sun	6	1916-17		3.75
43	Teetor-Hartley	Motor 6-3 x 5			1.25
		Auburn	1915-17	Pilot 1916-20	
115	Templar	4-445	1918-23		1.80
114	Velie	6-34	1920-22	(Falls)	1.25
350	Velie	6-48	1920-23	(Cont. 7R-8R)	1.10
395	**Velie 6-58**		1922-24		1.00
6	Weidely Motor	C 12-2⅞ x 5		(4)	1.00
	Austin	Hal		Kissel	
	Colonial	Pathfinder		Singer	
458	Weidely Motor	R 6 cyl.	1923		1.75
	Auburn	1923-24	Stutz	1923-24	
35	Westcott	4	1914-15	(Northway 52)	1.80
63	Westcott	6	1916-19	(Cont. 7W)	1.00
350	Westcott	6	1920-24	(Cont. 7R-8R)	1.10
97	White	4 16 Valve	1916-18		3.75
233	Winton	6	1916-24	(3)	1.25
71	Woods Mobilette		1915	(Universal)	1.80

Trucks—Tractors—Engines

The Victor line includes gaskets for practically all trucks and tractors.

Because of the large number of makes and models of trucks and tractors the following list is condensed to include only the names of (1) the more commonly used stock engines used in trucks and tractors and (2) trucks and tractors with special engines. For comprehensive list of trucks and tractors consult the Victor Gasket Guide—copy furnished on request.

In ordering gaskets for trucks and tractors, it is bes to specify the name and model of the engine.

Figure in parentheses indicates number of gaskets per motor where more than one is used.

Victor Number	Name	Model, Year or Rating	List Price, Each
182	Advance-Rumely	"Oil Pull" G 30-60	(2) 2.25
295	American La France Truck	5 Ton	3.00
198	Aultman & Taylor	30/60	(2) 1.80
412	Autocar	3-5 Ton	1.80
194	Avery Truck	6 Cyl. GL 1 Ton	2.50
474	Avery Industrial Tractor	4 x 5½ 1923	(2) 1.75
491	Avery Tractor	15/30 1923	1.50
89	Beaver Motor	JA 4½ x 6 JB 4¾ x 6	3.00
413	Beaver Motor	JA-JB (Cast in Pairs)	(2) 2.00
231	Bethlehem	K 1 Ton	2.50
232	Bethlehem	G. & H. 2-3 Ton	2.50
236	Bethlehem	J 4 Ton	3.00
368	Buda Motor	ATU 4-4¾ x 6½	5.50
368	Buda Motor	BTU 4-5 x 6½	5.50
211	Buda Motor	CTU-CBU 4-3¾ x 5¼	3.25
253	Buda Motor	FTU 4-4 x 5½	3.75
253	Buda Motor	ETU-EBU 4-4¼ x 5½	3.75
424	Buda Motor	GTU-GBU 4-4 x 5¼	3.00
210	Buda Motor	HTU 4-4¼ x 5½	3.00
379	Buda Motor	MU-WTU 4-3⅜ x 5⅛	2.50
209	Buda Motor	XTU 4-4¼ x 6	3.75
209	Buda Motor	YTU-YBU 4-4½ x 6	3.75
49	Buffalo Motor	BA 4-3½ x 5	3.75
174	Buffalo Motor	CA 4-4 x 5	2.50
10	Case Tractor	10/20	1.80
40	Case Tractor	10/18	1.50
156	Case Tractor	15/27	2.50
492	Case Tractor	22/40	1.60
105	Case (Wallis Cub Tractor)	15/25	1.80
389	Cletrac	F 9/16	1.80
387	Cletrac	W 12/20	1.60
285	Climax Motor	TU 4-5½ x 7	(2) 2.50
117	Climax Motor	K-KU 4-5 x 6½	(2) 2.50
96	Continental Motor	UA 4-3½ x 5	1.50
143	Continental Motor	B5 4-4¾ x 6	(2) 1.30
247	Continental Motor	J4 4-3¾ x 5	1.25
442	Continental Motor	K4 4-4⅛ x 5¼	1.25
269	Continental Motor	L4 4-4½ x 5½	(2) 1.25
377	Continental Motor (Bus)	6B	1.35
353	Erd Motor	TF 4 x 6 TFU 4¼ x 6	2.50
485	Fageol Bus	4 cyl. (Hall Scott)	2.00
483	Fageol Bus	6 cyl. (Hall Scott)	3.00
152	Fordson	4-4x5	1.00
418	Federal Truck	S-T-U 4-3½ x 5½	(4) .50
280	Federal Truck	W-X 4-4½ x 5½	(4) .50
304	G. M. C.	K-15-16 ¾-1 Ton	2.00
303	G. M. C.	K-41 2 Ton	2.25
302	G. M. C.	K-71-101 3½-5 Ton	2.50
430	G. M. C.	¾-1 Ton 1923-24	2.00
431	G. M. C.	2 Ton 1923-24	2.25
432	G. M. C.	3½-5 Ton 1923-24	2.50
5	Gray Motor	X-104 4-3½ x 5	2.50
199	Gray Motor	(Victory) 4-3½ x 5	2.50
11	Gray Motor	F-104 4-3⅛ x 5	1.80
438	Hart Parr Tractor	30	1.25
354	Hercules Motor	T 4 x 6 T2 4¼ x 6	(2) 2.50
240	Hercules Motor	CU2 3¾ x 5⅛ CU3 4 x 5⅛	2.50
462	Hercules Motor	O 4-4 x 5	1.70
279	Hercules Motor	MU2 4¼ x 5½ MU3 4½ x 5½	3.50
356	Herschell Spillman Motor	7000 4-3½ x 5	1.80
420	Hinkley Motor	HA-200 4½ x 5½ HA-500 4¼ x 5½	(2) 1.85
419	Hinkley Motor	HAA-300 3¾ x 5¼ HAA-400 4 x 5¼	(2) 1.85
148	Holt Caterpillar	40/45	(4) 1.25
151	Holt Caterpillar	75 70/120	(4) 1.60
149	Holt Caterpillar	55-75 M11, MS 16-17-21	(4) 1.00
463	Holt Caterpillar	T 16 10 Ton (Stockton)	(4) 1.10
494	Holt Caterpillar	10 Ton (Peoria)	.90
172	Holt Caterpillar	M12 M15 25/40	(2) 1.40
405	Holt Caterpillar	T 35	1.80
472	Holt Caterpillar	T 29 1923	(2) 2.00
107	International Truck	S. (Lycoming)	.85
454	International Truck	43 2 Ton	1.60
374	International Truck	63-103 3-5 Ton	1.50
	IHC Tractors—See McCormick-Deering and Titan. Consult Victor Gasket Guide for older models.		
268	Le Roi Motor	2C 4-3⅛x4½	1.25
73	Light Motor	H 4-3¼x4½	2.50
82	Lycoming Motor	L 4-3¼x5	1.70
107	Lycoming Motor	K 4-3½x5	.85
426	Lycoming Motor	C	1.25
444	McCormick-Deering Tractor	8/16	1.60
467	McCormick-Deering Tractor	15/30	1.75
318	Midwest Motor	400 4-4½x6	(2) 2.50
378	Midwest Motor	402 4-4⅛x5¼	(2) 2.50
447	Midwest Motor	399 4-4¾x6	(2) 2.50
144	Moline Universal	D 9/18	1.25
394	Pierce Arrow Truck	T-2 R-10 3½-5 Ton	2.00
516	Pierce Arrow Truck	2 Ton X	2.00
120	Republic Truck	9-10-14 ¾-1 Ton	1.25
481	Republic Truck	Model 15	5.00
500	Republic Truck	Model 14	1.50
47	Rutenber Motor	25 6-3⅛x5	1.40
68	Rutenber Motor	20 4 cyl. 3½"	3.75
217	Samson Tractor	M	2.00
103	Samson	"Iron Horse"	.50
250	Stearns Motor	AU 4¾x6½ BU 5x6½	4.50
510	Stewart Light Truck	1924	1.25
138	Titan (I.H.C.) Tractor	10/20	1.30
212	Twin City Tractor	12/20	2.00
147	Twin City Tractor	25/45	3.50
74	Vim	27-28-29-30 ½ Ton	.85
313	Waterloo Boy Tractor	R. & N. 12/25	1.80
196	Waukesha Motor	BUX 4-3¾x5¼	2.50
32	Waukesha Motor	TU 4-3½x5¼	3.00
264	Waukesha Motor	CU 4-4⅛x5¼	(2) 2.00
439	Waukesha Motor	DU 4-4½x6¼	(2) 1.80
440	Waukesha Motor	EU 4-5x6¼	(2) 1.80
273	Waukesha Motor	FU 4-4x5¾	(2) 2.00
464	Waukesha Motor	Y4-3¾x5¼ YA4-4x5¼	2.50
513	Waukesha Motor	Z	2.00
387	Weidely Motor	M, MA, MAB, MAT, MAU, 4 cyl.	1.60
188	White Truck	GO 40 3½ Ton	2.00
189	White Truck	GN 45 5 Ton	2.00
506	White Bus	GR-50	2.00
77	Wisconsin Motor	QU 4-3½x5	4.50
400	Wisconsin Motor	TAU 4x6 UAU 4¼x6 VAU 4½x6	2.50
408	Wisconsin Motor	NU 4-4½x5	2.00
409	Wisconsin Motor	SU 4-4x5	2.00
482	Wisconsin Motor	RAU 4-4¾x6 RBU 4-5x6	1.80

Standard Small Gaskets

Standard telescoping cartons containing 100 gaskets, sealed and clearly labelled with gasket number and size. Below are only a few of the more widely used gaskets. See Victor Gasket Guide for complete list.

CLOSED TYPE

The commonly used "ring" gasket.

Victor No.	I. D.	O. D.	Common Use	List per 100
2006	17/64"	7/16"	1/4" Stud Gasket	$ 0.84
2018	25/64"	5/8"	For Standard 3/8" Stud Bolts	.90
2024	13/32"	5/8"	Commonly used on studs	.90
2050	1/2"	3/4"	Commonly used Standard size	.84
2067	9/16"	3/4"	Spark Plug	1.00
2085	5/8"	7/8"	Standard 3/8" Stud Bolt	1.00
2106	23/32"	63/64"	Metric Spark Plug	.72
2108	3/4"	15/16"	Ford Crank Case Drain	.80
2110	3/4"	1"	Standard size in general use	1.00
2123	27/64"	15/32"	1/2" Spark Plug	.90
2125	7/8"	1 1/32"	Standard 7/8" Spark Plug	.64
2145	1"	1 1/4"	Commonly used Standard size	1.10
2159	1 1/16"	1 5/16"	Standard size in general use	1.30
2163	1 1/8"	1 3/8"	Commonly used Standard size	1.30
2172	1 5/16"	1 7/16"	Chevrolet, Dodge, General use	1.40
2185	1 1/4"	1 1/2"	Ford, Also used in other cars	.80
2212	1 3/8"	1 5/8"	Overland, also Standard	1.70
2222	1 15/32"	2"	Buick Intake and Exhaust	2.50
2224	1 7/16"	1 11/16"	Chevrolet Manifold	1.90
2229	1 15/32"	1 7/8"	Buick Transmission Cap	2.00
2233	1 1/2"	1 3/4"	Standard Size in general use	1.90
2235	1 1/2"	1 13/16"	Chandler Cylinder Plug	1.90
2239	1 1/2"	2"	Studebaker Intake Manifold	2.10
2246	1 33/64"	2 1/8"	Buick Intake Manifold	2.60
2252	1 9/16"	1 15/16"	Maxwell Manifold	2.10
2259	1 5/8"	1 7/8"	Dodge (1) Standard size	2.00
2274	1 17/32"	1 15/16"	Standard gasket in general use	2.00
2290	1 3/4"	2"	Standard size general use	2.10
2312	1 15/16"	2"	In general use	2.00
2325	1 7/8"	2 1/8"	Dodge, Exh. Manifold Standard	2.00
2339	1 15/16"	2 5/16"	Standard Port Plug Gasket	2.00
2349	1 31/32"	2 7/16"	Studebaker Exhaust Manifold	2.00
2356	2"	2 1/4"	Standard Port Plug Gasket	1.90
2383	2 1/16"	2 5/16"	Standard Gasket in general use	2.30
2400	2 1/8"	2 3/8"	Standard Gasket in general use	2.40
2414	2 5/16"	2 9/16"	Standard Size Cont.	2.60
2424	2 1/4"	2 1/2"	Standard size in general use	2.40
2460	2 5/8"	2 5/8"	Std. size general use on trucks	2.60
2462	2 3/8"	2 3/4"	Reo Valve Cage—Standard	2.90
2475	2 7/16"	2 11/16"	Standard size in general use	2.80
2485	2 1/2"	2 3/4"	Standard size in general use	2.60
2510	2 5/8"	2 7/8"	Standard size in general use	3.00

FRENCH TYPE

Open on the outer edge

Victor No.	I. D.	O. D.	Common Use	List per 100
4093	5/8"	7/8"	Standard size	$ 1.90
4118	23/32"	15/16"	Metric Spark Plug	1.00
4141	7/8"	1 1/8"	Standard 7/8" Spark Plug	1.30
4155	1"	1 5/16"	Standard size	1.60
4161	1"	2 1/32"	Buick Radiator Cap (Cork)	3.50
4196	1 1/4"	1 1/2"	Standard size	1.80
4257	1 1/2"	2 1/64"	Oakland Radiator Cap	4.50
4258	1 1/2"	2 1/64"	Buick Radiator Cap	5.00
4302	1 3/4"	1 31/32"	Standard size	2.30
4346	2"	2 1/4"	Standard size	2.90
4390	2 1/4"	2 9/16"	Standard size	3.00

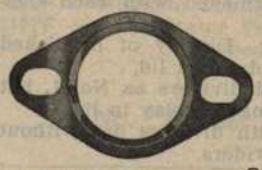
LUG TYPE

The lugs hold the gasket in place

Victor No.	I. D.	O. D.	Common Use	List per 100
4710	1 5/16"	1 5/8"	Oakland Intake	$ 2.00
4715	1 3/8"	1 3/4"	Oakland Exhaust	2.00
4757	1 15/16"	2 1/2"	Standard size general use	5.30

FLANGE (EXHAUST) TYPE

Victor No.	Center Hole	C. to C. of Bolt Hole	Common Use	List per 100
5068	1"	2 1/8"	3/4" S. A. E. Carburetor	$ 3.50
5085	1 1/16"	2 1/4"	7/8" S. A. E. Carburetor	3.60
5096	1 1/8"	2 1/8"	Ford Carburetor (Part 4134)	1.70
5118	1 5/16"	2 1/8"	Franklin Suction and Exhaust	2.50
5145	1 1/4"	2 3/8"	1" S. A. E. Carburetor	3.50
5198	1 7/16"	2 3/8"	Chevrolet Water Inlet	4.20
5200	1 7/16"	2 11/16"	1 1/4" S. A. E. Carburetor	4.20
5211	1 1/2"	2 3/8"	Ford Cylinder Water Inlet	1.80
5242	1 9/16"	2 5/32"	Standard size	4.50
5277	1 5/8"	2 3/4"	Standard	4.60
5324	1 3/4"	2 15/16"	1 1/2" S. A. E. Carburetor	4.80
5328	1 3/4"	3"	Ford Cylinder Water Inlet	2.50
5336	1 3/4"	3 1/8"	Overland Muffler head	5.00
5383	1 7/8"	3 3/8"	Studebaker Standard size	5.80
5420	2"	3 5/16"	1 3/4" S. A. E. Carburetor	5.40
5426	2"	3 1/2"	In general use	6.20
5497	2 1/4"	3 9/16"	2" S. A. E. Carburetor	8.00
5562	2 1/2"	4"	Standard size	9.00



FLANGE TYPE OVAL BOLT HOLES

To fit various spacings of bolts

Victor No.	Center Hole	C. to C. of Bolt Hole	Oval Bolt Hole	List per 100
5904	1 3/16"	2"	3/16x 1/2"	$ 3.80
5908	1 1/4"	2 1/4"	3/16x 1/2"	3.80
5928	1 1/2"	2 3/4"	13/32x 5/8"	3.80
5940	1 3/4"	2 7/8"	7/16x 3/8"	4.00
5960	2"	3 1/8"	1/2x 11/16"	6.00
5985	2 1/4"	3 3/8"	1/2x 15/16"	8.00
5996	2 1/2"	3 15/16"	1/2x 13/16"	10.00

CENTER FLANGE TYPE

Victor No.	I. D.	O. D.	Common Use	List per 100
6314	1 3/16"	1 9/16"	Wilmo Manifold	$ 3.20
6343	1 3/8"	1 3/4"	Standard size—general use	3.00
6353	1 7/16"	1 15/16"	Studebaker Lt. 6 Exhaust Manifold	4.00
6359	1 1/2"	1 7/8"	Overland Int. and Exhaust	4.00

TWO FLANGE TYPE

Handy for use in place of the ordinary closed type gasket with separate gland or pilot

Victor No.	I. D.	O. D.	Common Use	List per 100
6510	1 1/4"	1 1/2"	Ford Manifold (Parts 3063-3064)	$ 4.00
6512	1 3/8"	1 5/8"	Overland Int. and Exh., Buick Exh.	4.20
6514	1 1/2"	1 3/4"	Buick Studebaker Intake	4.60
6516	1 9/16"	1 15/16"	Maxwell Exhaust	4.80
6520	1 13/16"	2 7/16"	Haynes 75-77	5.50
6527	1 15/16"	2 3/16"	Studebaker Exhaust	5.80

The Victor Gasket-eer

IT—"asks 'em to buy."

A well balanced stock—an excellent means of keeping gaskets—an attractive store fixture—a good merchandiser—all in one—and at a very favorable price.

Strong steel case enameled olive green. Dividers of hard, durable fibre neatly indexed for each number of gasket. Room for extra dividers if wanted later—furnished at cost. Extra index labels for any popular numbers furnished free on request. Flexibility is a feature of the Victor Gasket-eer.

Three standard assortments. Dealer's cost on Gasket-eer less than ten lot price of gaskets only.

Full information on gaskets furnished with each Gasket-eer.

Gasket-eer No. 1 as illustrated. Display of burnished gaskets mounted on steel plate and set in lid.

Gasket-eer No. 2 same case and dividers as No. 1, but without lid display. Easy to arrange display in lid.

Gasket-eer No. 3. Steel box with dividers but without lid. Height flush with top of dividers.

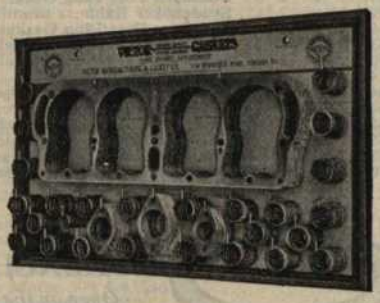
Victor Number	Name and Model	Quantity Gasket-eer No. 1	2	3
2	Overland 75-90, 1918-19	2	...	...
7	Chalmers, 1918-22	1	...	...
26	Dodge	10	10	6
63	Continental 7W (50 cars 1917-20)	2	1	1
64	Cole 8 (Northway) (2 per motor)	2	...	...
66	Oakland 6, 1916-23 (Olds 6-Scripps)	6	4	3
101	Ford	10	25	15
103-A	Chevrolet (Olds 4)	10	10	6
107	Lycoming K (Dort-Gardner-Others)	2	1	1
111	Nash 6, 1918-24	3	3	2
113	Cadillac 8 (2 per motor), 1917-22	2	...	...
190	Studebaker Big 6	2	2	1
191	Hupmobile, 1917-22	2	2	1
201	Essex 4	2	2	2
205	Overland 4, 1919-23	6	4	2
225	Marmon 6, 1920-24 (2 per motor)	2	...	...
252	Studebaker Special 6	3	3	1
297	Studebaker Light 6, 1920-22	4	4	2
345	Reo 6	2	2	1
350	Cont. 7R-8R-6S (30 cars 1920-24)	3	2	2
365	Jewett-Paige 6-42-44	2	2	2
377	Paige 6-66-70-Continental 6T	2	...	...
397	Buick 4, 1922-24	3	3	2
399	Hudson, 1914-24	3	2	2
401	Durant 4	2	2	2
425	Star	4	4	2
426	Lycoming CE 1923 (Several Cars)	2	...	...
428	Cont. 6Y-7U (Several Light Sixes)	2	2	...
429	Packard 6, 1922-24	2	...	...
449	Chandler 6, 1923-24	1	...	...
450	Hupmobile 4, 1923	2	...	...
461	Maxwell 4, 1916-24	6	6	4
473	Oakland 6 (L Head), 1924	2	...	...
480	Buick 6, 1924	4	4	3
486	Overland 92, 1923-24 (Red Bird)	2	2	2
	Total quantity of Gaskets	115	102	65
	Variety of Gaskets	35	24	23
	Shipping weight, lbs	125	110	70

	Gasket-eer No. 1	2	3
Combined list value of contents only	92.27	68.13	44.20

Gasket Assortments

No. JV22—Closed Type Gasket Assortment in wood box, 200 Gaskets of commonly used sizes...Each, 4.25

No. JV25—12 complete sets of Gaskets for Ford in wood box. . . ..Each, 8.00



No. JV53—For Fords. This board contains 25 Cylinder Head and 250 small Gaskets or 25 sets including Victor two flange Gasket for manifold.....Each, 25.25

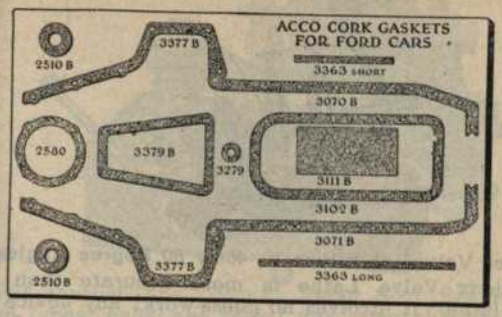
3-in-1 Manifold Gasket for Ford

A new and more efficient Ford Manifold Gasket. The 3-in-1 can be put on the manifold in the same length of time it takes to put on just one of the old style round gaskets. And it gives better results.

3-in-1 Manifold Gaskets for Ford.....Per 100, $15.00

"Our Hobby" is the Symbol of Real Service.

Cork Washers and Gaskets



FOR FORD CARS

No.	Where Used	Number in Box	Per 100
2510B	—Axle Outer Roller Bearing	20	2.50
2580	—Universal Ball Cap	10	2.50
3070B	—Crank Case and Cylinder, Left	20	3.00
3071B	—Crank Case and Cylinder, Right	20	3.00
3102B	—Crank Case Cover	10	6.00
3111B	—Cylinder Door	20	2.50
3279	—Magneto Contact Washer	10	.75
3363L	—Trans. Cover Strip (long)	10	1.00
3363S	—Trans. Cover Strip (short)	20	.50
3377B	—Trans. Cover	20	4.00
3379B	—Trans. Cover Door	10	4.00
3381	—Bendix Cover Gasket	10	1.75
5056	—Motor Mounting Gasket	10	1.50
5057	—Generator Head Gasket	10	1.50

FOR DODGE CARS

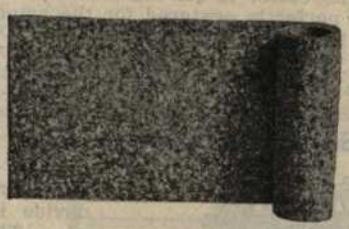
No.	Where Used	Number in Box	Per 100
A7727	—Right Side Crank Case	25	10.00
A7728	—Left Side Crank Case	25	10.00
A7863	—Both Ends Crank Case	25	3.00
A473	—Circulating Oil Strainer	25	1.75
A3719	—Oil Pump Case	25	1.80
A2394	—Breather Pipe Flange	25	2.00
A1709	—Oil Pump Cover	25	1.80
A1798	—Crankshaft Rear Bearing Oil Retainer	25	10.00
B1497	—Transmission Shaft Rear Bearing Oil Retainer	25	10.00
B1599	—Front Bearing Oil Retainer (clutch)	25	10.00

Cork Gasket Assortment for Ford

Contains one each of above gaskets for Ford, except Nos. 3381, 5056, 5057.

No. 816.....Per assortment, .60

Cork Gasket Sheets



This is the same material as our regular cork gaskets for Ford cars. Furnished in sheets 12x36 inches, 1/16, 3/32 or 1/8 inch thick.

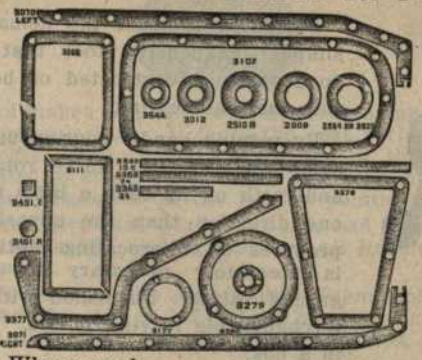
No. 116—Cork Sheets 1/16-inch thick.....Each, .34
No. 332—Cork Sheets 3/32-inch thick.....Each, .51
No. 180—Cork Sheets 1/8-inch thick.....Each, .68

Extra Heavy Grease Retainer for Ford

Made of high grade felt and extra heavy. Used in rear axle of Fords to prevent grease running out.

No. 2510EH.....Per 100, $9.00

Felt Washers and Gaskets for Ford



No.	Where used.	Per 100
2510BF	—Rear Axle Outer Roller Bearing	1.85
2809F	—Front and Rear Hub	1.85
3012F	—Cylinder Cover	1.50
3544F	—Steering Bracket	.30
3377F	—Transmission Cover	3.75
3070F	—Crank Case and Cylinder, Left	2.75
3071F	—Crank Case and Cylinder, Right	2.75
3102F	—Crank Case Cover	8.00
3379F	—Transmission Cover Door	4.50
3363LF	—Transmission Cover Strip (long	1.25
3336SF	—Transmission Cover Strip (short)	.70
3111F	—Cylinder Valve Cover	.30
3451F	—Control Shaft Bracket	.30
2580F	—Universal Ball Cap	2.00
3279F	—Magneto Contact Washer	.30
3177F	—Commutator Felt Ring—New	1.25

Packed 50 in a bundle.

No. "A" Set Felt Washers for Ford

Consists of the following Felt Washers and Gaskets for Ford cars:

2 No. 2510B.	2 No. 3377.	1 No. 3279.	1 No. 3379.
2 No. 2809.	1 No. 3070.	1 No. 2580.	1 No. 3363.
1 No. 3012.	1 No. 3071.	1 No. 3102.	1 No. 3363B.
1 No. 3544.	2 No. 3111.		

No. A Set.....Each, $0.70

No. "B" Set Felt Washers for Ford

Consists of the following Felt Washers and Gaskets for Ford cars:

2 No. 2510B.	2 No. 2809.
1 No. 3012.	1 No. 3544.

No. B Set.....Each, $0.25

Sioux Valve Grinders

Designed to meet the demand for a simple, inexpensive tool that will do good work. Constructed of best materials and ball-bearing.

By turning handle continuously in the same direction, the valve rotates back and forth on its seat, a little farther in one direction than the opposite. This produces a reciprocating motion which is absolutely necessary for perfectly ground valves. Furnished with five interchangeable driving points. Packed 1 in a box.

No. 400.....Each, 7.00

"Little Sioux" Valve Grinders

Similar in construction to Sioux Valve Grinder, but designed for the car-owner who desires to grind his own valves. Furnished with 5 interchangeable driving points. Packed 1 in a box.

No. 401.....Each, 3.50

Perfect Valve Grinders

Adjustable to fit any valve. Used with a regular bit brace. Head will swivel to permit grinding valves from any angle.

No. 7026.....Per doz., $4.80

Chain Valve Spring Release

Will fit any motor. The lever has a narrow fork at one end and a wide one at the other to accommodate valves having split washers or pins to hold the spring on the stem. Finish, black japan.

Packed 1 in a box.

No. 3.....Each, $0.90

T & L Valve Lifters

The T & L Valve Lifter is made of pressed steel, and operates as easily as a pair of pliers. It automatically locks itself when applied to the spring, allowing the free use of both hands to remove the pin and take out the valves. No hooks, chains, or springs to get out of order. This is the most practical and simple tool on the market. Especially adapted to Ford motors, but adjustable to other motors as well. Packed 1 in a box.

No. 28934—Small size for Ford and Small Cars.Each, $1.10
No. 28935—Large size for Large Cars and Tractors.....Each, $4.00

Sioux Valve Lathe

Refaces Valves of Either 30, 45 or 60 Degree Angles.

The Sioux Valve Lathe is more accurate than any machine lathe. It involves no guess-work; any novice can operate it. There are three adjustment stops for refacing valves of either 30, 45 or 60 degree angles. These three angle adjustments are accurately and permanently built into the tool. A change from one to the other is merely a matter of moving the degree plunger.

Any valve from 1⅜ to 4½ inches in diameter centers itself in the Sioux Valve Lathe. The tool is equipped with a swivel center device that brings the center adjustment automatically into perfect alignment on the valve. The two clamp devices take any size valve stem, and hold the valve firmly and steadily against the cutter, while the crank turns out the job.

The round cutter on the Sioux Valve Lathe sets up a new principle of cutting steel and cast iron valves. It leaves no ridges or uneven surfaces on the valve-face; it cuts an absolutely smooth surface without chattering. Furthermore, the circular shape of this cutter supplies unlimited cutting edge. This cutter has the life of at least ten ordinary cutters before it needs to be resharpened.

The Sioux Valve Lathe comes supplied with a small crank for small valves, and a larger size crank for large valves. It is also supplied with the necessary springs for all sizes of valves. The tool can be permanently fixed to a bench, or held in a vise while it works. Packed 1 in a box.

No. 600—Sioux Valve Lathe.....Each, 25.00
No. 601—Extra Cutters for above.....Each, 1.50

Little Sioux Valve Lathe

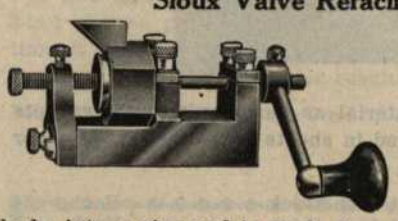
This is built on the same principle as the No. 600 except that it will only handle valves up to 2½ inches diameter. There are three adjustments plainly marked for refacing 30, 45 and 60 degree valves. Easy to adjust and after adjustment is made it cannot slip.

The tool holder is adjustable in or out and the cutter cannot get out of line with the valves. The cutter is circular shape, providing unlimited cutting edges and made of a special composition metal particularly adapted for cutting hard tungsten steel valves.

The frame is made to accommodate any size of valve stem. When the cutter is set for a certain size valve, it will always be perfectly centered for the same size valve. Packed 1 in a box.

No. 700.....Each, 12.50
No. 701—Extra Cutters for above.....Each, 1.50

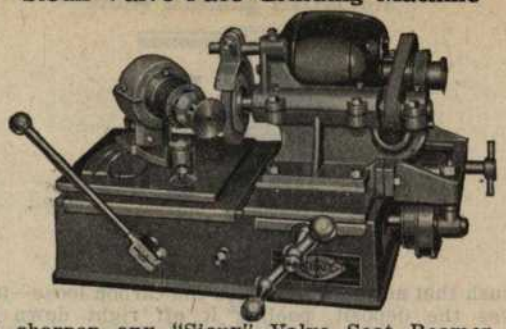
Sioux Valve Refacing Tool



The construction and operation of this device is very simple. The cutter is made of the best kind of Tungsten Steel, hardened and tempered to stand hard service. It locks into a vise and is ready for use in an instant. Will reface any cast iron valve from 1 to 2½ inches. One 45 degree cutter only is furnished as regular equipment. Packed 1 in a box.

No. 304—With 45 degree cutter.....Each, 7.25
No. 301—30 degree cutter only for above.....Each, 1.25
No. 302—45 degree cutter only for above.....Each, 1.25
No. 303—60 degree cutter only for above.....Each, 1.25

Sioux Valve Face Grinding Machine



Will sharpen any "Sioux" Valve Seat Reamer. Will grind tappet ends, and reseat any removable valve cages.

The Sioux Valve Face Grinding Machine is a motor-driven machine that will give superior service on a wide range of work. It is absolutely accurate on any class of work, and will prove itself a labor saver in any shop. It grinds and refaces any valves up to 4½ inches in diameter, and accommodates valve stems of ⅝-inch and under. It has marked adjustment stops for valve angles of 30, 45 and 60 degrees, but will work on any other angle desired. It is equipped with a Jacobs chuck, and is driven by a ¼-h. p. A. C. electric motor. If D. C. Motor is desired, add 6.00 to price. A. C. Motor shipped unless otherwise specified. Packed 1 in a box.

No. 650—With A. C. Motor.....Each, 210.00

Sioux Ford and Fordson Valve Refacing Tool

The Sioux Ford and Fordson Valve Refacing Tools, although low in price, are high grade tools accurately made. They will reface Ford and Fordson valves accurately and smoothly. The cutters are made of high Tungsten steel, the same as used for lathe tools. Packed 1 in a box.

No. 202—Ford.....Each, 1.75
No. 204—Fordson.....Each, 2.00

Sioux Ford and Fordson Valve Seat Reamers

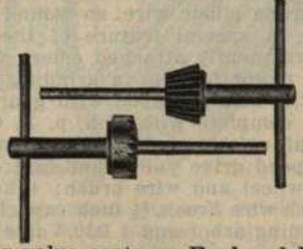
Cut shows "T" Handle Type.

The Ford and Fordson Valve Seat Reamers are tools of the same grade, material and workmanship as our standard line of reamers. They reface valve seats with the same accuracy and perfection.

Nos. 200 and 203 have a "T" handle, and No. 201 is furnished with square shank of the Hand Reamer type. Packed 1 in a box.

No. 200—Ford..... 1.75
No. 203—Fordson..... 2.00
No. 201—Ford..... 1.75

Sioux Ford and Fordson Valve Seat Reamer Set



For narrowing valve seats on Ford and Fordson motors. In ordering, please specify degree wanted. Packed 1 in a box.

No. 206A—15°, for Ford.....Each, 5.00
No. 206B—75°, for Ford.....Each, 5.00
No. 207A—15°, for Fordson.....Each, 6.00
No. 207B—75°, for Fordson.....Each, 6.00

Sioux Valve Seat Reamers

This tool makes a quick, easy job of removing all carbon pits and irregularities. It faces the seat perfectly at the proper angle. The reamers are made of the best tool steel, treated to stand up on valve seat reaming. Ground with proper clearance on the cutting points.

All Sioux Valve Seat Reamers can be had in any degree, 15, 30, 45, 60 or 75. Unless specified, all Reamers will be 45 degrees.

Sizes 1¼ to 2½ have $\frac{13}{32}$-inch Pilot Stem Hole and use Pilot Stems Nos. 120 to 125. Sizes 2$\frac{9}{16}$ to 4-inch have $\frac{17}{32}$-inch Pilot Stem Hole and use Pilot Stems Nos. 126 to 129.

Size	Each	Size	Each
1¼	3.50	2$\frac{3}{32}$	3.75
1$\frac{3}{32}$	3.50	2$\frac{1}{16}$	3.75
1$\frac{5}{16}$	3.50	2⅛	3.75
1$\frac{11}{32}$	3.50	2$\frac{3}{16}$	3.75
1⅜	3.50	2¼	3.75
1$\frac{13}{32}$	3.50	2$\frac{5}{16}$	3.85
1$\frac{7}{16}$	3.50	2⅜	3.85
1$\frac{15}{32}$	3.50	2$\frac{7}{16}$	3.85
1½	3.50	2½	3.85
1$\frac{17}{32}$	3.50	2$\frac{17}{32}$	3.85
1$\frac{9}{16}$	3.50	2$\frac{9}{16}$	4.25
1$\frac{19}{32}$	3.50	2⅝	4.25
1⅝	3.50	2$\frac{11}{16}$	4.50
1$\frac{21}{32}$	3.50	2¾	4.50
1$\frac{11}{16}$	3.50	2$\frac{13}{16}$	4.50
1$\frac{23}{32}$	3.50	2⅞	5.00
1¾	3.50	2$\frac{15}{16}$	5.25
1$\frac{25}{32}$	3.50	3	5.75
1$\frac{13}{16}$	3.50	3⅛	6.00
1$\frac{27}{32}$	3.50	3¼	6.25
1⅞	3.50	3⅜	6.75
1$\frac{29}{32}$	3.50	3½	7.00
1$\frac{15}{16}$	3.50	3⅝	7.50
1$\frac{31}{32}$	3.50	3¾	7.75
2	3.50	3⅞	8.10
		4	8.50

Sioux Reamer Pilot Stems

Accurately machined to fit perfectly. On special orders can furnish any size Pilot Stem to fit any size Valve Seat Reamers. Nos. 120 to 125 fit all Reamers 2½-inch and smaller. Nos. 126 to 129 fit all Reamers over 2½-inch. We can also furnish in $\frac{1}{64}$-inch oversize from factory. Packed 1 in a box.

No. 120—$\frac{5}{16}$ inch.....Each, 1.25
No. 121—$\frac{3}{8}$ inch.....Each, 1.25
No. 122—$\frac{13}{32}$ inch.....Each, 1.25
No. 123—$\frac{7}{16}$ inch.....Each, 1.25
No. 124—½ inch.....Each, 1.25
No. 125—$\frac{9}{16}$ inch.....Each, 1.25
No. 126—⅝ inch.....Each, 2.00
No. 127—$\frac{11}{16}$ inch.....Each, 2.00
No. 128—¾ inch.....Each, 2.00
No. 129—$\frac{13}{16}$ inch.....Each, 2.00

Sioux Standard Valve Seat Reamers

Designed to reseat valve seats of detachable head motors from 1⅜ to 2⅝ inches. Its wide variation has made it exceptionally popular with garages everywhere. Can be used with all regular Sioux Pilot Stems up to and including the $\frac{9}{16}$-inch. Made in 45 degree angle only. Packed 1 in a box.

No. 175.....Each, 5.00

Sioux Valve Tool Set

This set is complete enough to take care of practically all the jobs that an average garage or auto repair shop is likely to get. Sioux Valve Seat Reamers reface valve seats with the same dispatch, accuracy, smoothness and general satisfaction that the Sioux Valve Refacing tool refaces the valves. The standard set is made in 45 degrees angle only and consists of 1 No. 304 Valve Refacing Tool, 5 Valve Seat Reamers and 3 Pilot Stems.

Reamers.		Reamers.	
1⅝-inch	45°	2 -inch	45°
1⅞-inch	45°	2⅛-inch	45°
2¼-inch	45°		

Pilot Stems $\frac{5}{16}$-inch, ⅜-inch and $\frac{7}{16}$-inch.

No. 300. . . . . Per set, 28.50

Sioux Valve Tool Set

A complete set for practically all reseating jobs. It includes 10 Sioux Valve Seat Reamers and 4 Pilot Stems.

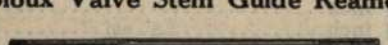
Reamers.		Reamers.	
1½-inch	45°	1⅞-inch	45°
1⅝-inch	45°	2 -inch	45°
1⅝-inch	30°	2⅛-inch	45°
1¾-inch	30°	2¼-inch	45°
1¾-inch	45°	2½-inch	45°

Pilot stems $\frac{5}{16}$-inch, ⅜-inch, $\frac{7}{16}$-inch, ½-inch.

Comes complete in box with each stem place and each reamer post marked for each size.

No. 325. . . . . Per set, 40.00

Sioux Valve Stem Guide Reamer



This type of Reamer is the most successful for reaming worn valve guide holes. The pilot end of the Reamer is to guide and prevent the Reamer from following the worn part of the hole.

Sioux Quality—the highest grade tool, set, heat treated and machined with absolute accuracy. Insures a quick, sharp, smooth cut, and will keep its fine edges almost permanently.

For reaming $\frac{1}{64}$-inch oversize on all sizes of Valve Stem Guides.

Made in the four sizes, each size plainly marked for convenient use.

Reamer Size		Each
$\frac{31}{64}$	—For reaming $\frac{1}{64}$ over $\frac{5}{16}$-inch	2.50
$\frac{32}{64}$	—For reaming $\frac{1}{64}$ over ⅜-inch	2.70
$\frac{33}{64}$	—For reaming $\frac{1}{64}$ over $\frac{7}{16}$-inch	2.90
$\frac{33}{64}$	—For reaming $\frac{1}{64}$ over ½-inch	3.10

Special or larger sizes made to order. Price upon request.

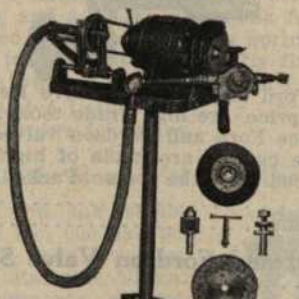
Sioux Carbon Removing Brush

A brush that not only scratches the carbon loose—it really removes the deposit, peeling it off right down to the metal, restoring the metal's bright polish and finish. Since the first automobile mechanic attempted to remove carbon from cylinder heads and blocks, numerous scratchers and scrapers have been put upon the market, but without exception they have been only partially successful. This Sioux Carbon Removing Brush is the outgrowth of a long-felt need—it possesses the two main requirements—efficiency and speed. The secret of the efficiency of the Sioux Brush lies in the strength and stiffness of the wires and their arrangement. Their unbending stiffness insures a firm contact against the carbon, and the brush is extremely durable and strong.

For use with small electric drills and Sioux Flexible Shaft, fitted with both ¼-inch and $\frac{5}{16}$-inch arbors.

No. B66—Coarse . . . . . Each, 2.50
No. B67—Fine . . . . . Each, 2.50
No. B68—Set of Fine and Coarse . . . . . Each, 5.00

Sioux Flexible Shaft and Attachments



Transmits power exactly where you want it. Especially adapted for Valve Grinding. The 3-speed pulley provides the correct speed, low for large valves, higher for smaller valves. A control enables you to stop and start at will. Can take emery wheel to the work and get into inaccessible places. Especially handy in welding work for smoothing out the weld. Other jobs for which the Sioux Flexible Shaft and Attachments are quick and handy are Drilling, Reaming and Polishing and Cleaning Carbon.

The roller bearing features, an exclusive Sioux feature on the Flexible Shaft, adds life and gives more power by eliminating friction in the casing. The shaft itself is made of high grade music wire, so wound as to make the shaft compact. A special feature of the Sioux Flexible Shaft is the permanently attached emery wheel (6-inch by ½-inch) to the motor for use in grinding tools and other small parts. It is also equipped with guard and tool rest.

No. 802—Stand complete with ½-h. p. A. C. motor, flexible shaft with universal joint and spindle control, 3-speed drive pulley and belt; 2 arbors for emery wheel and wire brush; 4-inch emery wheel; 4-inch wire brush, ¼-inch capacity Jacobs chuck including arbor and 1 B30 Valve Grinding Attachment. . . . . Each, 165.00

No. 804—Stand complete, 6-inch wire brush permanently attached on motor, one 4-inch emery wheel and arbor, ¼-h. p. A. C. motor . . . . . Each, 130.00

No. 825—Comes complete as No. 802, except valve grinding attachment and universal joint . . Each, 135.00

If D. C. motor is desired, add 6.00 to above prices.

Holly Bushing Extractors

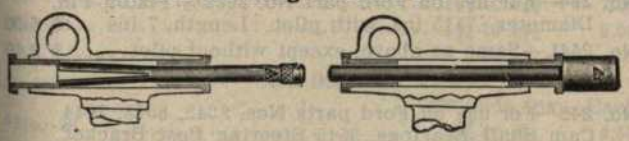
Furnished in three sizes:

No. 1 Tool extracts ten bushings in the Ford, also a large number in other standard makes of cars; any bushing ranging in size from ½-inch to $\frac{9}{16}$ inch, inclusive. . . . . Each, 3.00

No. 2 Tool extracts bushings from $\frac{5}{8}$ to $\frac{11}{16}$ inch, inclusive. . . . . Each, 3.50

No. 3 Tool extracts bushings from $\frac{11}{16}$ to $\frac{13}{16}$ inch, inclusive. . . . . Each, 4.00

Stevens Bushing Drivers for Ford



Extractor Driver

For Ford Steering Body Bushings, No. 2713—Made from nickel steel and guaranteed against breakage.

No. T226—Extractor only. . . . . Each, $1.00

No. T225—Set of 1 each, Extractor and Driver. Per set, $1.60

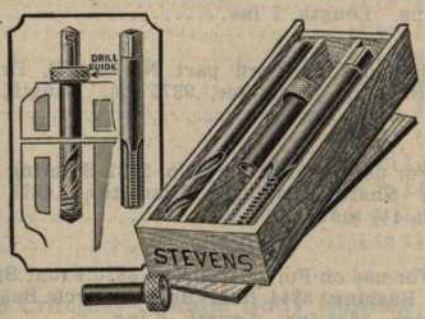
Stevens Oversize Tap and Bolt Set for Ford

Unnecessary to remove cylinder head. Bolts have same head and thread as original, but are $\frac{1}{16}$ in. oversize. Set has 10 Bolts and one Special Tap. Furnished with two different lengths of bolts. Packed 1 set in a box.

No. T-201—Set No. 1, with 2⅝ in. bolts. . . . . Per set, $5.00

No. T-202—Set No. 2, with 3¼ in. bolts. . . . . Per set, $5.00

Stevens Tap and Drill Set for Ford



With this set a shopman can now safely replace broken Ford cylinder head bolts without taking off the cylinder head. The drill guide slips into the hole in cylinder head and guides the drill accurately through center of broken bolt. The tap then clears out the hole for a new bolt of standard size without removing the cylinder head.

Set includes drill guide, drill and special tap packed in a box.

No. T-200. . . . . Each, $3.00

Three-Cornered Scrapers

Drop forged, oil tempered and full polished. Hollow ground, with steel ferrule. Rosewood finish handles. Packed ½ dozen in a cardboard box.

Length over all, 7¾ inches. Length of Blade, 3½ inches.

No. 7. . . . . Each, $1.60

Bearing Scrapers

These Bearing Scrapers are forged from a very high grade of tool steel, and are correctly hardened and tempered. The degree of hardness and the correctly shaped cutting edges give them a very smooth, easy cut.

When dull these scrapers can be honed on an oil stone to a perfect edge.

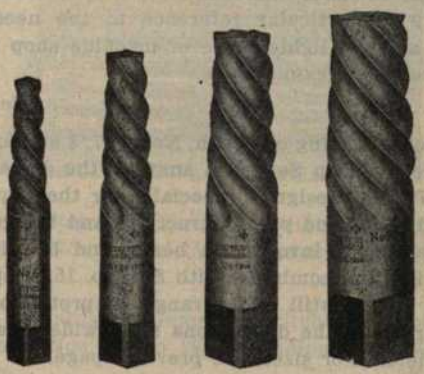
The large polished hard-wood handle, and the polished round shanks, make these tools very attractive in appearance, and comfortable to use.

This Set consists of 3 Scrapers, 1 each 10, 11 and 12-inch.

Packed one set in a pasteboard box, 12½x3¼x1½ inches.

No. 471. . . . . Per set, $4.50

"Ezy-Out" Screw Extractors

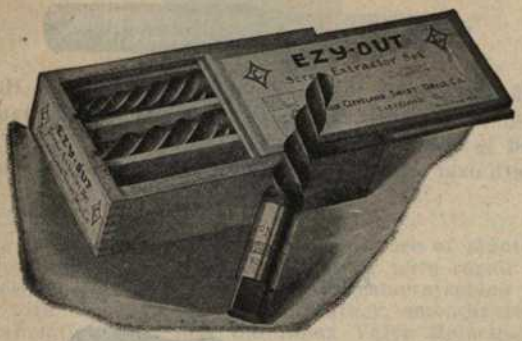


These tools are expressly designed for removing broken screws of all kinds without injuring the threads in the hole. The method of operation is very simple—a hole is drilled in the broken screw, "Ezy-Out" is inserted and given a slight twist to seat it firmly in the hole. At the same time its left hand spirals grip the sides of the drilled hole and the twisting action which this exerts serves to back the broken screw out of its hole and without injury to the threads in the hole. Made in nine sizes and furnished singly or in sets.

No.	Diameter, ins. Small End	Large End	Length, ins. Flute	Over All	Each
1	$\frac{1}{16}$	⅛	½	2	.55
2	$\frac{3}{32}$	$\frac{5}{16}$	¾	2⅜	.60
3	⅛	¼	1	$2\frac{11}{16}$	.65
4	$\frac{5}{16}$	$\frac{11}{32}$	1¼	3	.75
5	¼	$\frac{7}{16}$	1½	3⅜	.85
6	⅜	$\frac{13}{32}$	1¾	3¾	1.00
7	½	¾	2	4⅛	1.35
8	¾	$1\frac{1}{64}$	2⅛	4⅜	1.85
9	1	$1\frac{9}{32}$	2¼	4⅝	2.65

For sets, see next page.

"Ezy-Out" Screw Extractor Sets



No. 17 set includes one each Nos. 4, 5 and 6 and is the original "EZY-OUT" Set for general utility service in machine shop, garage and factory. It is an ideal all-purpose set. For sizes, see previous page.

No. 17.....Per set, 2.35

No. 15 set includes one each Nos. 1, 2, 3, 4 and 5. It is designed with particular reference to the needs of the tool-room and the lighter type of machine shop work. For sizes, see previous page.

No. 15.....Per set, 3.00

No. 16 set, including one each, Nos. 6, 7, 8 and 9, is known as the "Heavy Shop Set," and answers the demand for an "EZY-OUT" Set, designed especially for the requirements of railroad shops and yards, structural and bridge workers and similar fields involving a heavy and broad range of work. It is often combined with Set No. 15, by the larger shops, to give a still wider range of protection against broken screws of the dimensions most widely used in the machine field. For sizes, see previous page.

No. 16.....Per set, 6.65

Standard Taper Pin Reamers

Taper ¼ inch per foot.

No.	Diam. Small Ends, Ins.	Length of Flute, Ins.	Total Length, Ins.	Each
00	0.114	1½	2¼	1.35
0	0.127	1⅝	2⅜	1.00
1	0.146	1¾	2½	1.00
2	0.162	2	3	1.25
3	0.183	2¼	3½	1.50
4	0.208	2½	4	1.75
5	0.240	3	4½	2.00
6	0.279	3⅝	5	2.25
7	0.331	4½	6¾	2.50
8	0.398	5¼	8	3.00

Special Reamers for Ford

Spiral Flutes except as noted.

No. 248—For use on Ford part No. 2581 D. S. Housing Front Bushing. Diameter, 1.002 ins. Length, 7 ins.....$ 5.00

No. 211—For use on Ford parts, Nos. 2713 Spindle Body Bushing, 2714 Spindle Arm Bushing. Dia. large part, .9645 ins., small part, .5055 ins. Length, 9 ins.....$ 2.15

No. 244—For use on Ford part No. 3022½ Piston Pin. Diameter, .7515 ins. with pilot. Length, 7 ins....$ 5.00

No. 244L—Same as above, except without pilot.....$ 2.40

No. 245—For use on Ford parts Nos. 3042, 3043, 3044 Cam Shaft Bearings, 3545 Steering Post Bracket Bushing. Diameter, .750 ins. Length, 7 ins.....$ 3.15

No. 253—For use on Ford part No. 3052B Valve Stem Bushing. Diameter, .328 ins. Length, 6 ins....$ 2.25

No. 262—For use on Ford part No. 3058B. Push Rod Reamer (oversize) with Pilot. Diameter, .4375 ins. Length, 8 ins.....$ 4.75

No. 255—For use on Ford part No. 3304. Reverse Gear Bushing. Diameter, 2.303 ins. Length, 12⅝ ins.$13.50

No. 256—For use on Ford Part No. 3309. Slow Speed Gear Bushing. Diameter, 1.656 ins. Length, 10½ ins.....$ 8.00

No. 258—For use on Ford parts Nos. 3320B and 3320C Transmission Driven Gear Sleeve Bushing, No. 3311 Brake Drum Assembly, and No. 2540 D. S. Housing Front Bearing. Diameter, 1.000 ins. Length, 10⅞ ins.....$ 7.50

No. 243—For use on Ford part No. 3314½ Transmission Triple Gear Flanged Bushing. Diameter, .6778 ins. Length, 7 ins.....$ 2.50

No. 260—For use on Ford part No. 3327B, Driving Plate Bushing. Diameter, .9375 ins. Length, 6¾ ins.....$ 4.00

No. 249—For use on Ford part No. 3521 Steering Gear Pinion Shaft Bushing. Diameter, .4375 ins. Length, 4½ ins.....$ 2.10

No. 241—For use on Ford parts Nos. 3820 Front Spring Perch Bushing, 3844 Rear Spring Perch Bushing. Diameter, .5625 ins. Length, 5 ins.....$ 2.50

No. 251—For use on Ford parts Nos. 3031 C. S. Rear Bearing Cap, 3032 C. S. Front Bearing Cap, 3033 C. S. Center Bearing Cap. Diameter, 1.250 ins. Length, 26 ins.....$22.50

Genuine Critchley Expanding Reamers

Made of Semi-High Speed Steel, with hardened Square and Nut. To increase the diameter of the reamer it is only necessary to slack up one nut and screw up on the other.

Five Blade

	Expands, ins.	Each
No. 00	15/32 to 17/32	4.50
No. 00¼	17/32 to 9/16	4.50
No. 00½	9/16 to 5/8	4.50
No. 0	5/8 to 11/16	4.75
No. 0½	11/16 to 3/4	4.75
No. 1	3/4 to 13/16	5.00
No. 1½	13/16 to 7/8	5.00
No. 2	7/8 to 31/32	5.50
No. 3	31/32 to 1 1/16	5.80
No. 4	1 1/16 to 1 9/32	6.60
No. 5	1 9/32 to 1 15/32	7.50
No. 6	1 15/32 to 1 11/16	9.00

Six Blade

	Expands, ins.	Each
*No. 19	27/64 to 29/64	4.50
No. 20	7/16 to 1/2	4.50
No. 21	1/2 to 9/16	4.50
No. 22	9/16 to 5/8	4.50
No. 23	5/8 to 11/16	4.75
No. 24	11/16 to 3/4	4.75
No. 25	3/4 to 13/16	5.00
No. 26	13/16 to 7/8	5.00
No. 27	7/8 to 1	5.50
No. 28	1 to 1 1/16	5.80
No. 29	1 1/16 to 1 1/4	7.00
No. 30	1 1/4 to 1 7/16	8.00
No. 31	1 7/16 to 1 5/8	10.00
No. 32	1 5/8 to 1 7/8	11.50
No. 33	1 7/8 to 2 1/16	15.00
No. 34	2 1/16 to 2 1/16	18.00
No. 35	2 1/16 to 3	22.00
No. 36	3 to 3 1/16	26.00
No. 37	3 1/2 to 4 1/16	30.00

*For Buick Rocker Arm Bushing.

Six Blade (Letter Sizes)

	Expands, ins.	Each
No. A	15/32 to 17/32	4.50
No. B	17/32 to 19/32	4.50
No. C	19/32 to 21/32	4.75
No. D	21/32 to 23/32	4.75
No. E	23/32 to 25/32	5.00
No. F	25/32 to 27/32	5.00
No. G	27/32 to 29/32	5.50
No. H	29/32 to 1 1/32	5.80
No. I	1 1/32 to 1 3/32	7.00
No. J	1 3/32 to 1 11/32	8.00
No. K	1 11/32 to 1 17/32	10.00

Genuine Critchley Spindle Body Bushing Reamer

For reaming Ford Spindle Bodies.

Guaranteed to do the job right. Can also furnish other sizes for other make of cars.

No. F2713—For Ford Cars.....Each, 5.50

C. & T. Piston Pin Aligning Reamer

Pistons reamed with C. & T. Aligning Reamer are reamed in alignment, assuring fit of Piston Pins.

No.	Expansion	Piston Diameter	Each	Nuts Each	Blades Each
55	15/32 to 21/32	2 to 3¼	8.00	.30	.50
56	21/32 to 23/32	2 to 3½	8.00	.30	.50
57	23/32 to 25/32	2 to 4	8.00	.35	.50
58	25/32 to 31/32	2 to 4½	9.00	.35	.60
59	27/32 to 33/32	2 to 4½	9.50	.40	.60
60	29/32 to 31/32	2 to 4½	10.00	.40	.60
61	31/32 to 1 3/32	2 to 4½	11.00	.45	.60
62	1 3/32 to 1 5/32	2 to 4½	12.00	.45	.75
63	1 5/32 to 1 5/32	2 to 4½	13.50	.50	.75
64	1 5/32 to 1 7/32	2 to 4½	15.00	.50	.75
65	1¼ to 1 5/16	6	16.50	.55	.75
66	1 5/16 to 1⅜	6	18.00	.55	.90
67	1⅜ to 1 7/16	7	19.50	.55	.90
68	1 7/16 to 1½	7	21.00	.55	.90

Genuine Critchley Sets

*No. 7619—Contains 7 Genuine Critchley 6 blade Reamers, Nos. 19 to 25, expanding from 27/64 to 13/16-inch.....Each, 32.50

No. 7620—Contains 7 Genuine Critchley 6 blade Reamers, Nos. 20 to 26, expanding from 7/16 to 7/8-inch.....Each, 33.00

*No. 10619—Contains 10 Genuine Critchley 6 blade Reamers, Nos. 19 to 28, expanding from 27/64 to 1⅛-inch.....Each, 48.80

No. 10620—Contains 10 Genuine Critchley 6 blade Reamers, Nos. 20 to 29, expanding from 7/16 to 1¼-inch.....Each, 51.30

No. 76A—Contains 7 Genuine Critchley 6 blade Reamers, Nos. A to G, expanding from 15/32 to 13/16-inch.....Each, 34.00

No. 106A—Contains 10 Genuine Critchley 6 blade Reamers, Nos. A to J, expanding from 15/32 to 1 11/32-inch.....Each, 54.80

*Sets marked with a star contain No. 19 Buick Rocker Arm Reamer.

Genuine Critchley Ford Utility Set

Intended particularly for Ford. Consists of 9 Reamers, including No. 57, supplied in case.

Ford Utility Set.....Each, 68.50

Parts for Genuine Critchley Reamers

Made from a special Semi-High Speed Steel manufactured particularly for use in Reamers.
In ordering, specify Reamer No.

No. of Reamer	Cutters Each	Adj. Nuts Each
00 to 1	.30	.30
2 to 3	.36	.30
4	.40	.35
5	.44	.40
6	.50	.45
7	.60	.56
8	.70	.60
9	.95	.80
10	1.10	1.10
11	1.20	1.20
12	1.40	1.40
19 to 24	.30	.30
25 to 26	.35	.35
27 to 28	.40	.40
29 to 30	.45	.45
31	.55	.50
32	.65	.60
33	.70	.65
34	.80	.75
35	1.00	1.00
36	1.20	1.20
37	1.35	1.35
A to D	.30	.30
E to F	.35	.35
G to H	.40	.40
I to J	.45	.45
K	.55	.50

No. 128-A Hand Reamers

Eccentric Flutes.

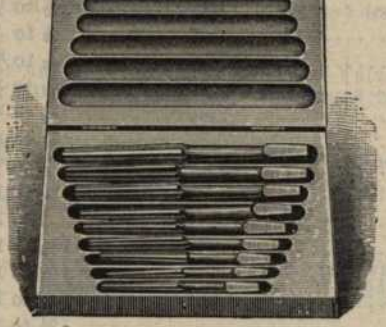
Diameter, ins.	Length of Flute, ins.	Length Over All, ins.	Each
1/8	1 1/2	3	1.00
5/32	1 5/8	3 1/4	1.10
3/16	1 3/4	3 1/2	1.20
7/32	1 7/8	3 3/4	1.30
1/4	2	4	1.40
9/32	2 1/8	4 1/4	1.45
5/16	2 1/4	4 1/2	1.50
11/32	2 3/8	4 3/4	1.55
3/8	2 1/2	5	1.60
13/32	2 5/8	5 1/4	1.70
7/16	2 3/4	5 1/2	1.75
15/32	2 7/8	5 3/4	1.85
1/2	3	6	1.90
17/32	3 1/8	6 1/4	1.95
9/16	3 1/4	6 1/2	2.00
19/32	3 3/8	6 3/4	2.10
5/8	3 1/2	7	2.20
21/32	3 13/32	7 1/4	2.30
11/16	3 27/32	7 11/16	2.40
23/32	4 1/16	8 1/8	2.50
3/4	4 3/16	8 3/8	2.60
25/32	4 23/64	8 23/32	2.70
13/16	4 17/32	9 1/16	2.80
27/32	4 11/16	9 3/8	2.95
7/8	4 27/32	9 11/16	3.10
29/32	5 3/16	10 3/32	3.25
15/16	5 1/8	10 1/4	3.40
31/32	5 1/2	10 11/32	3.55
1	5 7/16	10 7/8	3.70
1 1/32	5 1/2	11 1/16	3.85
1 1/16	5 5/8	11 1/4	4.00
1 3/32	5 23/32	11 7/16	4.15
1 1/8	5 13/16	11 5/8	4.30
1 5/32	5 29/32	11 13/16	4.45
1 3/16	6	12	4.60
1 7/32	6 1/16	12 1/8	4.75
1 1/4	6 1/8	12 1/4	4.90

No. 137A Bit Brace Taper Reamers**

Each Reamer at the largest cutting diameter is approximately 1/16-inch larger than the size stamped on shank. These Reamers have a taper 3/4 inch to the foot and follows from the smallest to the largest, so that with set of Reamers, any size 1/4-inch to 1 1/4 inch can be made. **The quality and finish will be found of the very best.**

Size	Length Flute, ins.	Length Over All, ins.	Each
1/4	1 7/8	4 1/4	.6
5/16	2	4 1/2	.6
3/8	2 1/8	4 3/4	.6
7/16	2 1/4	4 13/16	.7
1/2	2 5/16	5 5/16	.7
9/16	2 11/16	5 5/16	.8
5/8	2 3/4	5 11/16	.9
11/16	1 7/8	4 1/4	1.1
3/4	3 1/8	6 1/4	1.2
13/16	3 1/8	6 1/4	1.5
7/8	3 1/2	6 11/16	1.7
15/16	3 1/2	6 11/16	2.0
1	4	7 1/4	2.2

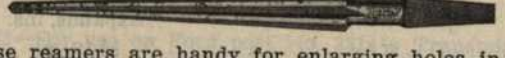
Bit Brace Taper Reamer Sets



These sets consist of 1 of each size of bit brace reamers listed. Each set put up in neat wood box.

No.	Sizes Inches	Per Set
25	1/4, 5/16, 3/8, 7/16, 1/2	$ 5.60
29	1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4	$11.60

Repairman's Taper Reamers



These reamers are handy for enlarging holes in sheet metal, wood, hard rubber, steel, etc., and for reaming out or aligning holes.

	Dia. Large End	Dia. Small End	Lgth.	Each
No. 5	1/2 in.	1/8 in.	6 1/2 in.	.80
No. 6	1 in.	3/8 in.	6 1/2 in.	1.60

Pipe Burring Reamers

These Reamers offer the most rapid and convenient method of removing the burr in the end of water pipe and electric conduit caused by cutting it off. These Reamers possess all the fine qualities characteristic of Mayhew tools—hammer forging, careful machining, electric tempering and superior finish.

No. 386—Reams Pipe 1/8 to 1 1/4 inches.....Each, $3.20
No. 382—Reams Pipe 1/8 to 2 inches.....Each, $6.30

Machinists' Hand Taps

TAPER

PLUG

BOTTOMING

These Taps are made of a high grade of steel in all three styles, taper, plug and bottoming.

In stock U. S. Standard. Other threads from factory only. Unless otherwise specified, we send U. S. Standard. Orders must specify whether Taper, Plug or Bottoming Taps are wanted.

Dia. ins.	Threads to Inch in Stock	Threads to Inch from Factory	Total Length, ins.	Each
1/16	24	32	2 1/4	.40
1/4	20	24, 27, 32	2 1/2	.45
5/16	18	20, 27, 32	2 23/32	.50
3/8	16	20, 27	2 15/16	.55
7/16	14	24, 27	3 5/32	.60
1/2	13	12, 24, 27	3 3/8	.70
9/16	12	27	3 1/2	.80
5/8	11	12, 27	3 13/16	.90
11/16	11	..	4 1/16	1.05
3/4	10	12, 27	4 1/4	1.20
13/16	10	..	4 5/16	1.40
7/8	9	12, 27	4 1/16	1.60
15/16	9	..	4 29/32	1.80
1	8	12, 27	5 1/8	2.00
1 1/8	7	..	5 7/16	2.25
1 1/4	7	..	5 3/4	2.60
1 3/8	6	..	6 1/16	3.00
1 1/2	6	..	6 3/8	3.50
1 5/8	5 1/2	..	6 11/16	4.20
1 3/4	5	..	7	5.00
1 7/8	5	..	7 5/16	5.80
2	4 1/2	..	7 5/8	6.70

S. A. E. Standard Taps

These Taps are the same as those listed above, except they are made in accordance with the standard adopted by the Society of Automotive Engineers. The form of threads is the same as that of U. S. Standard, but the pitches are finer.

TAPER, PLUG OR BOTTOMING

Specify Style Desired.

Size, Ins.	No. of Threads to the Inch	Total Length, Ins.	Each
1/4	28	2 1/2	.45
5/16	24	2 23/32	.50
3/8	24	2 15/16	.55
7/16	20	3 5/32	.60
1/2	20	3 3/8	.70
9/16	18	3 1/2	.80
5/8	18	3 13/16	.90
11/16	16	4 1/16	1.05
3/4	16	4 1/4	1.20
7/8	14, 18	4 11/16	1.60
1	14	5 1/8	2.00

Machine Screw Taps

A. S. M. E. Standard.

In stock Plug. Can furnish Taper and Bottoming from factory.

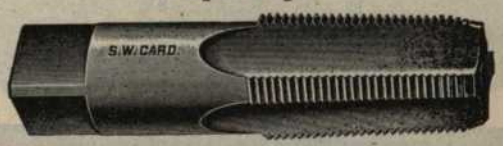
Size of Screw Gauge	No. Threads to Inch Regularly Furnished	Threads Also Furnished	Each
No. 1	72	56, 64	.50
No. 2	64	56	.45
No. 3	56	48	.40
No. 4	48	32, 36, 40	.40
No. 5	44	36, 40	.35
No. 6	40	32, 36	.35
No. 7	36	30, 32	.35
No. 8	36	30, 32, 40	.35
No. 9	32	24, 30	.35
No. 10	30	24, 28, 32	.40
No. 12	28	24, 32	.45
No. 14	24	20	.45
No. 16	22	18, 20	.45
No. 18	20	18	.50
No. 20	20	16, 18	.50

Stove Bolt Taps

Made to Correspond in sizes and threads to the American's Screw Company's stove bolts. Other sizes and threads will be charged as special.

Size, Inches	No. Threads to Inch	Each
5/16	24	.40
1/4	18	.45
5/16	18	.50
3/8	16	.55

Pipe Taps



At the prices shown we can furnish either the regular Taper or Straight Plug Taps. Orders must state which is wanted.

Size, Ins.	No. Threads to Inch	Each
1/8	27	1.00
1/4	18	1.20
3/8	18	1.60
1/2	14	2.00
3/4	14	2.80
1	11 1/2	4.40
1 1/4	11 1/2	5.00
1 1/2	11 1/2	6.60
2	11 1/2	10.00

Pipe Reamers

These Reamers are furnished in same sizes and at same prices as Pipe Taps, but must be shipped direct from factory.

Boiler Taps

STRAIGHT

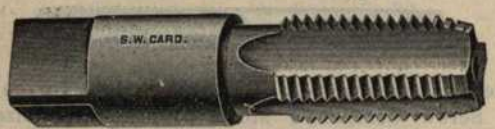
TAPER

The Taper Taps are Tapered ¾-inch to the foot to make a steam-tight fit. Diameter given is size of Tap about ⅝-inch from large end of thread. All 12 threads to the inch. U. S. Standard.

The full thread of the Straight Taps is straight. The reamer at point is used to size the hole and serves as a gauge for size of drill to be used before Tapping.

Dia., ins.	Threads to inch	Length over all, ins.	Each
½	12	4¼	1.05
9/16	12	4⅝	1.25
⅝	12	5	1.40
11/16	12	5¼	1.60
¾	12	5½	1.95
13/16	12	5¾	2.25
⅞	12	6	2.50
15/16	12	6¼	2.80
1	12	6½	3.35

Short Patch Bolt Taps



Shorter than the regular taper Boiler Taps, but have the same degree of taper, ¾-inch to the foot. All 12 threads to the inch, U. S. Standard.

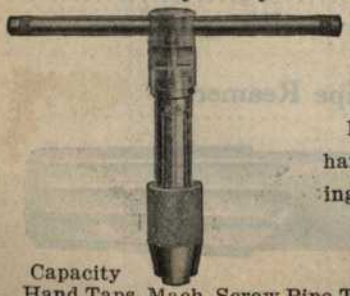
Diameters listed are taken about ⅝-inch from the large end of the thread, giving a steam-tight fit.

Size, ins.	Threads to inch	Length over all, ins.	Each
½	12	3	1.00
⅝	12	3	1.25
¾	12	3¼	1.70
13/16	12	3¼	1.95
⅞	12	3¼	2.25
15/16	12	3¼	2.40
1	12	3½	2.80

Little Giant Tap and Reamer Wrenches

No.	Hand Taps, Inches	Mach. Screw Taps, Ins.	Pipe Taps, Inches	Length, Inches	Each
00	1/16 to 5/16	0 to 13		5	1.75
0	1/16 to ¼	0 to 18		7	2.00
4	1/16 to ⅜	0 to 24	⅛	9	3.00
5	5/16 to ½	10 to 30	⅛ to ¼	11	3.50
6	¼ to ¾	14 to 30	⅛ to ⅜	15	4.00
7	⅜ to 1	15 to 30	⅛ to ¾	19	5.00
7½	⅜ to 1¼	22 to 30	¼ to ¾	31	6.50
8	¾ to 1½		⅜ to 1	40	8.00

"T" Style Tap Wrenches**



Have right and left hand ratchet, and sliding "T" handle.

No.	Capacity Hand Taps, Inches	Mach. Screw Taps, Inches	Pipe Taps, Inches	Length, Inches	Each
338	1/16 to 5/32	0 to 18	⅛	4	$2.00
333	5/32 to ½	12 to 30	⅛	3⅝	$4.00

Little Giant Adjustable Dies

Little Giant Adjustable Dies U. S. S. threads furnished unless otherwise specified.

Sizes, dimensions and threads not listed are subject to special prices.

In ordering dies, specify outside diameter of collet.

Note.—Little Giant Dies, A. S. M. E. Standard Screw Gauge Nos. 2 to 20 other regularly furnished machine screw sizes and pitches and fractional sizes 1/16 to ¼ in. U. S.S. threads can be furnished at $0.75. These dies fit 1¼ in. diameter collets.

Left-hand dies are special.

Prices shown are each.

Cutting Sizes	For 1¼ in. Collet	For 1⅝ in. Collet	For *2 in. 2¾ in. 4 in. Collet	For 4½ in. Collet	No. Threads per inch Standard Pitches USS	SAE	Also Furnished USF
¼	.75	1.00	1.00		20	28	24, 27, 32
5/16	.....	1.00	1.00		18	24	20, 27, 32
⅜	.....	1.25	1.25		16	24	20, 27
7/16	.....	.....	1.25		14	20	24, 27
½	.....	.....	1.50		13	20	12, 24, 27
9/16	.....	.....	1.50		12	18	27
⅝	.....	.....	1.75		11	18	12, 27
11/16	.....	.....	1.75		11	16	
¾	.....	.....	2.00		10	16	12, 27
13/16	.....	.....	2.75		10		
⅞	.....	.....	2.75		9	14, 18	12, 27
15/16	.....	.....	2.75		9		
1	.....	.....	2.75		8	14	12, 27
1⅛	.....	.....	4.00		7	12	
1¼	.....	.....	4.00		7	12	
1⅜	.....	.....	5.00		6	12	
1½	.....	.....	5.00		6	12	

*Note.—2 in diameter collets take die sizes 5/16 in.-½ in. incl.

2¾ in. diameter collets take die sizes 5/16 in.-1 in. incl.

4 in. diameter collets take die sizes ⅝ in.-1¼ in. incl.

4½ in. diameter collets take die sizes 13/16 in.-1½ in. incl.

Note.—V Threads can also be furnished at special price.

Little Giant Collets, Guides and Caps

Diameter Collet	1¼"	1⅝"	2"	2¾"	4"	4½"
Holds Dies to	3/32"	⅜"	5/16-½"	5/16-1"	⅝-1¼"	13/16-1½"
Collet Complete, each	.55	.80	.80	1.30	2.25	3.00
Guide, each	.20	.30	.30	.50	.75	1.00
Cap, each	.35	.50	.50	.80	1.50	2.00

Bit Brace Shank Guide for 2 in. diam. Cap..... .50

Little Giant Stocks and Guides*

For Full Mounted Screw Plates. Dies not included.

Size, Ins.	Length Stock, Ins.	Each Stock	Each Guide
1/16	8¾	1.60	.30
¼	8¾	1.60	.30
5/16	8¾	1.60	.30
⅜	13½	1.90	.30
7/16	13½	1.90	.30
½	20½	2.25	.50
9/16	20½	2.25	.50
⅝	25½	2.75	.50
11/16	25½	2.75	.50
¾	25½	2.75	.50
13/16	29	3.25	.50
⅞	29	3.25	.50
15/16	29	3.25	.50

Little Giant Single Stocks

No. of Stock	Diam. of Collet, Ins.	Size of Dies	Length of Stock, Ins.	Each
A1	1¼	0-16	7½	1.25
A10	1⅝	14-24	13½	2.00
1	2	1/16-½	14½	2.50
5	2¾	3/16-1	23	3.50
7	2¾	3/16-1	26	3.50
9	2¾	3/16-1	29	3.50
20	5	½x1¼	40	6.00
25	4½		52	8.00

Solid Hexagon Dies**

For Cleaning Up Threads.

These Dies have same dimensions as hexagon nuts of equal size. Furnished **U. S. S. and S. A. E.**

Unless otherwise specified, we send U. S. Standard.

Used principally for repair work, and for dressing over bruised or rusty threads, and will go into any space that hexagon nuts will go into.

They can be used in bit brace sockets, ratchet or monkey wrenches and will be found convenient in many ways.

Size, ins.	Threads U. S. S.	Threads S. A. E.	Across Flat, ins.	Thickness, ins.	Each
¼	20	28	7/32	¼	$1.40
5/16	18	24	11/32	5/16	$1.60
⅜	16	24	13/32	⅜	$1.80
7/16	14	20	⅞	7/16	$2.00
½	13	20	1 1/16	½	$2.20
9/16	12	18	1 1/16	½	$2.40
⅝	11	18	1¼	⅝	$2.80
¾	10	16	1 7/16	¾	$3.60

Easy Screw Plates**

Single Mounted.

Furnished U. S. S. exact size unless otherwise ordered. An adjustable Tap Wrench with each set.

Length stocks 15½ ins.; weight, 8 lbs.
Cutting ¼, 20; 5/16, 18; ⅜, 16; 7/16, 14; ½, 12 inch.

No. 1B.....Per set, $27.00

Length stocks, 15½ and 23 ins.; weight, 13 lbs.
Cutting ¼, 20; 5/16, 18; ⅜, 16; 7/16, 14; ½, 12; ⅝, 11; ¾, 10 inch.

No. 5B.....Per set, $42.00

Full Mounted.

Furnished U. S. S. exact size unless otherwise ordered. An adjustable Tap Wrench with each set.

Cutting ¼, 20; 5/16, 18; ⅜, 16; 7/16, 14; ½, 12 inch.

No. 51.....Per set, $33.00

Cutting ¼, 20; 5/16, 18; ⅜, 16; 7/16, 14; ½, 12; 9/16, 12; ⅝, 11; ¾, 10; ⅞, 9; 1, 8 inch.

No. 57½.....Per set, $91.50

Diamond Automobile Screw Plate

Three Screw Plates in one, containing a good assortment of Machine Screws, U. S. Standard or V Standard and S. A. E. Standard sizes. Complete in one case.

23 Plug Taps and 23 Round Adjustable Dies, 2 Tap Wrenches and 2 Die Stocks, as follows:

10 1/16-inch Round Dies, cutting 2-56, 3-48, 4-36, 6-32, 8-32, 10-24, 12-25, 14-20, 16-18, 18-18.
10 Machine Screw Taps to match above.
1 7-inch Diamond Die Stock for 1/16-inch Round Dies.
1 No. 0 Card Tap Wrench fitting taps 1/16 to ¼-inch.
6 1 5/16-inch Round Dies, cutting, 1/16-24, ¼-20, 5/16-18, ⅜-16, 7/16-14, and ½-13, U. S. Standard Threads.
6 Machinists' Plug Hand Taps to match above Dies.
7 1 5/16-inch Round Dies, cutting ¼-28, 5/16-24, ⅜-24, 7/16-20, ½-20, 9/16-18, ⅝-18, S. A. E. Standard Thread.
7 Machinists' Plug Hand Taps to match above Dies.
1 14-inch Diamond Die Stock for 1 5/16-inch Round Dies.
1 No. 2 Tap Wrench fitting Taps ¼-inch to ⅝-inch.

No. 5.....Per set, 42.00

Little Giant Screw Plates**

U. S. S. AND S. A. E. COMBINATION.

These combination sets avoid the expense of buying a separate outfit for each thread standard and the consequent duplication of Stocks and Tap Wrenches.

A Bit Brace Die Holder is also provided for convenience where it is desired to run over a slightly battered thread without removing the bolt or screw from its place in the car.

No. 310 Set consists of following:

¼, 20; 5/16, 18; ⅜, 16; 7/16, 14; ½, 13 U. S. Standard.
¼, 28; 5/16, 24; ⅜, 24; 7/16, 20; ½, 20 S. A. E. Standard.
Stock 14½ inches long. Adjustable Tap Wrench No. 5. Dia. Collets, 2 inches.
U. S. S. Taper Taps and S. A. E. Plug Taps.

No. 310.....Per set, $58.50

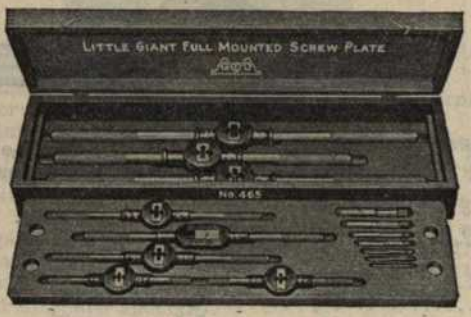
No. 311 Set consists of following:

¼, 20; 5/16, 18; ⅜, 16; 7/16, 14; ½, 13; 9/16, 12; ⅝, 11; ¾, 10 U. S. Standard dies.
¼, 28; 5/16, 24; ⅜, 24; 7/16, 20; ½, 20; 9/16, 18; ⅝, 18; ¾, 16 S. A. E. Standard dies.
16 Dies, 16 Taps.
Two Stocks 14½ and 23 inches long.
Two Adj. Tap Wrenches, Nos. 5 and 6.
Dies up to and including ½-inch in 2-inch dia. Collets; sizes larger than ½-inch in 2¾-inch dia. Collets.
U. S. S. Taper Taps and S. A. E. Plug Taps.

No. 311.....Per set, $112.00

Little Giant Screw Plates**

SINGLE MOUNTED



FULL MOUNTED

In the U. S. Standard the ½-inch size is 13 threads to the inch.
Single mounted equipped with one die stock and one adjustable tap wrench.
Full mounted has die stock for each size die but only one tap wrench.

SINGLE MOUNTED, U. S. STANDARD SIZES

No. Set	Per Set	Cutting U. S. Standard Threads, ins.	Stocks Length, ins.	Adj. Tap Wrenches	Collets, dia., ins.	Wt., lbs.
1	$37.00	¼-20 5/16-18 ⅜-16 7/16-14 ½-13	14½	No. 5	2	9
5	$55.00	¼-20 5/16-18 ⅜-16 7/16-14 ½-13 ⅝-11 ¾-10	23	No. 6	2¾	20
5½	$61.50	¼-20 5/16-18 ⅜-16 7/16-14 ½-13 9/16-12 ⅝-11 ¾-10	23	No. 6	2¾	22
7	$84.00	¼-20 5/16-18 ⅜-16 7/16-14 ½-13 ⅝-11 ¾-10 ⅞-9 1-8	26	Nos. 5 & 7	2¾	27
7½	$88.50	¼-20 5/16-18 ⅜-16 7/16-14 ½-13 9/16-12 ⅝-11 ¾-10 ⅞-9 1-8	26	Nos. 5 & 7	2¾	29

FULL MOUNTED, U. S. STANDARD SIZES

A Stock Is Furnished for Each Size Die

No. Set	Per Set	Cutting U. S. Standard Threads, ins.	No. of St'ks furnished	Adj. Tap Wrenches	Weight lbs.
51	$ 44.00	¼-20 5/16-18 ⅜-16 7/16-14 ½-13	5	No. 5	13½
65	$ 69.00	¼-20 5/16-18 ⅜-16 7/16-14 ½-13 ⅝-11 ¾-10	7	No. 6	24
65½	$ 77.00	¼-20 5/16-18 ⅜-16 7/16-14 ½-13 9/16-12 ⅝-11 ¾-10	8	No. 6	28
67	$108.00	¼-20 5/16-18 ⅜-16 7/16-14 ½-13 ⅝-11 ¾-10 ⅞-9 1-8	9	Nos. 5 & 7	40
67½	$116.50	¼-20 5/16-18 ⅜-16 7/16-14 ½-13 9/16-12 ⅝-11 ¾-10 ⅞-9 1-8	10	Nos. 5 & 7	42

SINGLE MOUNTED SAE SIZES

All SAE Plates are equipped with Plug Taps

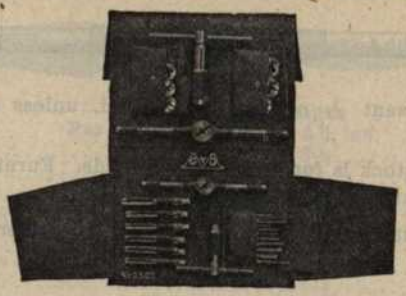
No. Set	Per Set	Cutting SAE Threads, ins.	Stocks, Length, ins.	Adj. Tap Wrenches	Collets, dia., ins.	Wt. lbs.
1 SAE	$37.00	¼-28 5/16-24 ⅜-24 7/16-20 ½-20	14½	No. 5	2	8
5 SAE	$55.00	¼-28 5/16-24 ⅜-24 7/16-20 ½-20 ⅝-18 ¾-16	23	No. 6	2¾	20
5½SAE	$61.50	¼-28 5/16-24 ⅜-24 7/16-20 ½-20 9/16-18 ⅝-18 ¾-16	23	No. 6	2¾	22
7½SAE	$88.50	¼-28 5/16-24 ⅜-24 7/16-20 ½-20 9/16-18 ⅝-18 ¾-16 ⅞-14	26	Nos. 5 & 7	2¾	29

FULL MOUNTED SAE SIZES

All SAE Plates are equipped with Plug Taps
A Stock Is Furnished for Each Size Die

No. Set	Per Set	Cutting SAE Threads, ins.	No. of St'ks furnished	Adj. Tap Wrenches	Weight lbs.
51 SAE	$ 44.00	¼-28 5/16-24 ⅜-24 7/16-20 ½-20	5	No. 5	13
65 SAE	$ 69.00	¼-28 5/16-24 ⅜-24 7/16-20 ½-20 ⅝-18 ¾-16	7	No. 6	24
65½SAE	$ 77.00	¼-28 5/16-24 ⅜-24 7/16-20 ½-20 9/16-18 ⅝-18 ¾-16	8	No. 6	28
67½SAE	$116.50	¼-28 5/16-24 ⅜-24 7/16-20 ½-20 9/16-18 ⅝-18 ¾-16 ⅞-14 1-14	10	Nos. 5 & 7	42

G. T. D. Button Die Screw Plate Sets



Has 16 Taps, 16 Dies, 2 Stocks and 2 Tap Wrenches. Sizes arranged with special reference to screw threads found on Ford Automobile Model T; also adapted to a great variety of cars. It is light, compact, durable and convenient. Set in leather roll.

SAE Standard Round Adjustable Dies and Taps, of the following sizes:

6, 32; 10, 24; 10, 32; 12, 24; 14, 24; 1/32, 32; 1/4, 20; 5/16, 18; 5/16, 24; 3/8, 16; 3/8, 24; 13/32, 16; 7/16, 14; 7/16, 20; 1/2, 20, and 1/8-inch pipe.

Plug Taps; Round (Button) Dies.
13/16-inch Dia. Dies for 5/16 and smaller sizes.
1-inch Dia. Dies for 3/8 and larger sizes.
2 Stocks, 6 3/8 inches and 9 inches long.
2 Tap Wrenches, 4 inches and 5 1/2 inches long.
Size, closed, 9 3/4 x 6 1/4 x 1 1/4 inches.

No. 2500 Set—Weight, 2 1/2 lbs.....Per set, 26.00

This Assortment of Taps, Dies and Reamers has been selected to meet the demand from garages and repair shops, and is based on their experience in handling repairs on Ford Cars.

Screw cutting sizes 1/4, 28; 5/16, 24; 3/8, 24; 13/32, 16; 7/16, 14; 1/2, 20.

Plug Taps and Round Adjustable Dies.
Spiral Fluted Reamers.
2-in-1 for spindle body and spindle arm bushing.
1 for piston pin bushing.
Stock for Round Adjustable Dies.
"T" Tap Wrench (Adjustable).

No. 2501—Weight, 4 1/4 lbs.....Per set, 17.00

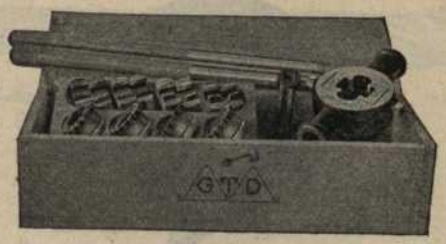
Little Giant Screw Plates

Single Mounted.

Stock 7 1/2 inches long; Adjustable Tap Wrench No. 0; Plug Taps, Dies, Collets, 1 1/4-inch diameter.

No.	Cutting Machine Screw Sizes.	Per Set
AA2	4-36, 6-32, 8-32, 10-24, 12-24. Wgt. 2 1/2 lbs.....	11.50
AA4	4-36, 6-32, 8-32, 10-24, 12-24, 14-20, 16-18. Wgt. 3 lbs.....	14.50

Little Giant Pipe Stock and Die Sets



Dies are adjustable to overcome variations in fittings.

Stocks are made to give sufficient leverage for work required. Handles of stocks are of pipe and knurled so as to prevent slipping.

Unless otherwise ordered we send Briggs' Standard Right Hand Threads.

Left Hand Dies at special prices.

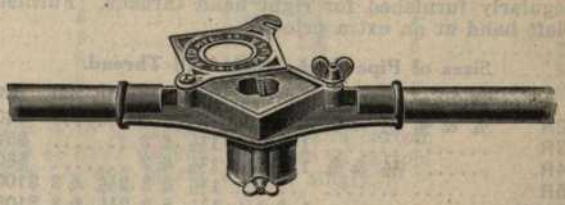
No.	Stock ins.	Cutting ins.	Weight, lbs.	Per Set
C260	22	1/8, 1/4, 3/8, 1/2	6	9.00
C261A	36	1/4, 3/8, 1/2, 3/4, 1	12	12.00
C261 1/2A	41	1/2, 3/4, 1, 1 1/4	12	14.00
C262A	51	1 1/4, 1 1/2, 2	26	18.00

Reed Adjustable Pipe Sets

Right hand sets and dies will be furnished unless otherwise specified. Packed in waterproof fibre shelf box.

Set No.	Consisting of Stock and	Cutting Pipe, ins.	Per Set
1 AP1	4 R.H. Dies	1/8 to 1/2	9.00
2 AP1	5 R.H. Dies	1/4 to 1	12.00
2 1/2 AP1	4 R.H. Dies	1/2 to 1 1/4	14.00
3 AP1	3 R.H. Dies	1 1/4 to 2	18.00

Reed Solid Pipe Stocks and Dies



Fitted With Reed Quick and Easy Dies

Right hand sets will be sent unless otherwise specified.

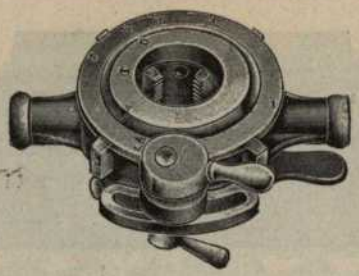
Set No.	For Pipe, ins.	Outside Size of Dies, ins.	Per Set
0 SP1	1/8 to 1/2	2 x2 x1/2	8.00
1 SP1	1/4 to 1	2 1/2 x2 1/2 x3/4	10.50
1 1/2 SP1	3/4 to 1 1/4	3 x3 x3/4	9.50
1 1/2 SP3	1/4 to 1 1/4	3 x3 x3/4	15.50
2 SP1	1 1/4 to 2	4 x4 x7/8	14.50

Parts For Pipe Stocks

No.	0	1	1 1/2	2
Size, Dies, ins.	2x2x1/2	2 1/2 x2 1/2 x3/4	3x3x3/4	4x4x7/8
*Dies—Each.	1.40	1.60	2.00	2.50
*Guides—Each.	.30	.40	.60	.75

Items marked * are F. O. B. Factory and not carried in stock.

Oster Pipe Stocks and Dies**



Bull Dog Regular Stocks

In Oster stocks the Dies are operated by convenient lever movements and easily released from the work by one movement of the hand. No loose bushings or set screws.

The Guides are adjustable to all sizes of pipe.

Regularly furnished for right hand threads. Furnished for left hand at an extra price.

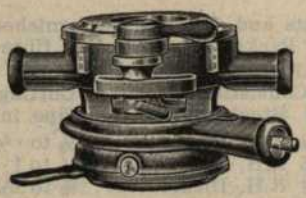
Sizes of Pipe Each Stock Will Thread.

No.	One Set	One Set	One Set	One Set	Each
101	⅛	¼ & ⅜	½ & ¾	.....	$26.00
102	¼ & ⅜	½ & ¾	1 & 1¼	.....	$34.00
103	.....	.....	1 & 1¼	1½ & 2	$44.00
104	.....	½ & ¾	1 & 1¼	1½ & 2	$50.00

Sizes of Pipe Each Stock Will Thread.

No.	One Set	One Set	One Set	One Set	Each
*105	.....	1½ & 2	2½ & 3	.....	$80.00
*105½	1 & 1¼	1½ & 2	2½ & 3	.....	$86.00
*107	.....	.....	2½ & 3	3½ & 4	$110.00
*107½	.....	1½ & 2	2½ & 3	3½ & 4	$117.00

Nos. 105 to 107½ have 4 handles.



Made with two handles in the body and one handle in the ratchet part, so that tool may be used with two handles as a regular stock or one handle as a ratchet stock. Two handles are regularly furnished with each tool.

Regularly furnished for right hand threads. Furnished for left hand at an extra price.

Sizes of Pipe Each Stock Will Thread.

No.	One Set	One Set	One Set	One Set	One Set	Each
102R	¼ & ⅜	½ & ¾	1 & 1¼	.....	.....	$40.00
103R	.....	.....	1 & 1¼	1½ & 2	.....	$54.00
104R	.....	½ & ¾	1 & 1¼	1½ & 2	.....	$60.00
*105R	.....	.....	.....	1½ & 2	2½ & 3	$100.00
*105½R	.....	.....	1 & 1¼	1½ & 2	2½ & 3	$106.00

Oster Extra Dies

No.	Prices per Set of 4 Pieces, Size of Dies ¼&⅜	½&¾	1&1¼	1½&2	2½&3	3½&4	For Stock No.
*102D	$6.00	$6.00	$6.00	....	....	....	102
*103D	....	....	$7.00	$7.00	....	....	103
*104D	....	$7.00	$7.00	$7.00	....	....	104
*105D	....	....	....	$10.00	$10.00	....	105
*105½D	....	....	$10.00	$10.00	$10.00	....	105½
*107D	....	....	....	....	$12.00	$12.00	107
*107½D	....	....	....	$12.00	$12.00	$12.00	107½
*102RD	$6.00	$6.00	$6.00	....	....	....	102R
*103RD	....	....	$7.00	$7.00	....	....	103R
*104RD	....	$7.00	$7.00	$7.00	....	....	104R
*105RD	....	....	....	$10.00	$10.00	....	105R
*105½RD	....	....	$10.00	$10.00	$10.00	....	105½R

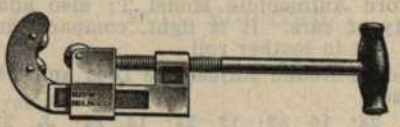
Pump Rod Plates

Will be sent $\frac{1}{32}$ oversize, V thread, unless otherwise ordered.

Regular stock is for right hand threads. Furnished with left hand threads at extra price.

No. 108—Cutting ⅜, 14; $\frac{7}{16}$, 12.....Per set, $8.00

Barnes Three-Wheel Pipe Cutters



Reed Make—Guaranteed Throughout

No.	Cuts Pipe	Wt., lbs.	Each
1B	⅛ to 1	3	4.50
2B	½ to 2	4¼	6.00
3B	1½ to 3	8	10.00
4B	2½ to 4	12½	20.00
5B	4 to 6	19½	30.00
6B	6 to 8	24	40.00
6½B	8 to 10	35	45.00
7B	9 to 12	51	50.00

PARTS FOR BARNES' PIPE CUTTERS

In ordering Repairs for Pipe Cutters, it is necessary to give the number, kind of Pipe Cutter, and above all the name of the manufacturer.

No.	*11	*12	*13	*14	*15	*16	*16½	*17
For No.	1B	2B	3B	4B	5B	6B	6½B	7B
Wheels Each. .	.25	.30	.40	.50	.75	.75	.75	.75
Pins Doz. .	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00

Saunders Roller Pipe Cutters

Reed Make—Guaranteed Throughout

No.	Cuts Pipe	Wt., lbs.	Each
1S	⅛ to 1	3	3.00
2S	1 to 2	6¼	4.50
3S	2 to 3	11¾	11.00
4S	2½ to 4	15	18.00
5S	4 to 6	23	28.00

PARTS FOR SAUNDERS PIPE CUTTERS

In ordering Repairs for Pipe Cutters, it is necessary to give the number, kind of Pipe Cutter, and above all, the name of the manufacturer.

No.	*21	*22	*23	*24	*25
For No.	1S	2S	3S	4S	5S
Wheels, each.	.24	.32	.60	.60	.60
Rollers, each.	.24	.32	.50	.50	.60
Pins, each.	.10	.10	.15	.15	.15

*Goods marked * are F. O. B. Factory and not carried in stock

No. 114—Bit Stock Drill Bits for Metal or Wood

Diameter, ins.	Per Dozen	Length Over All, ins.	Wt. Ozs. Each
1/16	2.50	3 5/16	1
3/32	2.70	3 3/16	1
1/8	3.00	3 1/8	1
5/32	3.50	4 1/16	1
3/16	4.00	4 3/16	1
7/32	4.50	4 3/16	1
1/4	5.00	4 1/8	1½
9/32	6.00	5 1/8	1½
5/16	7.00	5 3/8	1½
11/32	8.00	5¾	1½
3/8	8.50	6	2
13/32	9.25	6¼	2
7/16	10.50	6½	3
15/32	11.75	6¾	3
1/2	13.00	7	3½
17/32	14.25	7¼	4
9/16	15.50	7½	4½
19/32	16.75	7½	5
5/8	18.00	7½	5
21/32	19.50	7½	5
11/16	21.00	7½	6
23/32	22.50	7½	6
3/4	24.00	7½	7
25/32	25.50	7½	7
13/16	27.00	7½	7½
27/32	28.50	7½	8
7/8	30.00	7½	9
29/32	31.50	7½	10
15/16	33.00	7½	10
31/32	34.50	7½	11
1	36.00	7½	12

Sizes 1/16 to 1/2 packed 12 of size in box.
Sizes 17/32 to 1 packed 6 of size in box.

No. 108—Straight Shank Drill Bits

Short Set

Diameter, ins.	Per Dozen	Length Over All, ins.	Wt. Ozs. Each
1/64	1.50	1½	1
1/32	1.55	1¾	1
3/64	1.60	2½	1
1/16	1.65	2⅝	1
5/64	1.70	2¾	1
3/32	1.75	2⅞	1½
7/64	1.80	3	1½
1/8	1.85	3⅛	2
9/64	1.90	3¼	2½
5/32	2.00	3⅜	3
11/64	2.25	3½	4
3/16	2.50	3⅝	5
13/64	2.75	3¾	5½
7/32	3.00	3⅞	6½
15/64	3.25	4	7½
1/4	3.50	4⅛	9
17/64	3.80	4¼	10
9/32	4.00	4⅜	11½
19/64	4.35	4½	12
5/16	4.70	4⅝	18
21/64	5.05	4¾	18
11/32	5.50	4⅞	18
23/64	6.00	5	24
3/8	6.50	5⅛	24
25/64	7.00	5¼	30
13/32	7.75	5⅜	30
27/64	8.50	5½	30
7/16	9.25	5⅝	36
29/64	10.00	5¾	42
15/32	11.00	5⅞	42
1/2	12.00	6	42

Sizes 1/64 to 1/16 packed 12 of size in envelope.
Sizes 5/64 to 1/2 packed 6 of size in envelope.

No. 120—½-Inch Round Shank Drill Bits

Diam., ins.	Length, ins.	Each	Diam., ins.	Length, ins.	Each
1/8	4 7/8	.45	33/64	6	1.60
5/32	4 7/8	.45	3/4	6	1.70
3/16	5 5/8	.50	35/64	6	1.80
7/32	5 5/8	.55	1 3/16	6	1.90
1/4	6	.60	37/64	6	2.00
9/32	6	.65	7/8	6	2.10
5/16	6	.70	39/64	6	2.20
11/32	6	.75	1 5/16	6	2.30
3/8	6	.80	41/64	6	2.40
13/32	6	.85	1	6	2.50
7/16	6	.90	1 1/32	6	2.60
15/32	6	.95	1 1/16	6	2.70
1/2	6	1.00	1 3/32	6	2.80
17/32	6	1.05	1 1/8	6	2.90
9/16	6	1.10	1 5/32	6	3.00
19/32	6	1.20	1 3/16	6	3.10
5/8	6	1.30	1 7/32	6	3.20
21/32	6	1.40	1 1/4	6	3.30
11/16	6	1.50			

Sizes 1/8 to 1/2 packed 12 of size in carton.
Sizes 17/32 to 1 packed 6 of size in carton.
Sizes 1 1/32 and larger packed singly.

No. 116—⅝-Inch Round Shank Drill Bits

Diam., ins.	Length, ins.	Each	Diam., ins.	Length, ins.	Each
1/8	4 7/8	.50	33/64	6	1.60
5/32	4 7/8	.55	3/4	6	1.70
3/16	5 5/8	.60	35/64	6	1.80
7/32	5 5/8	.65	1 3/16	6	1.90
1/4	6	.70	37/64	6	2.00
9/32	6	.75	7/8	6	2.10
5/16	6	.80	39/64	6	2.20
11/32	6	.85	1 5/16	6	2.30
3/8	6	.90	41/64	6	2.40
13/32	6	.95	1	6	2.50
7/16	6	1.00	1 1/32	6	2.60
15/32	6	1.05	1 1/16	6	2.70
1/2	6	1.10	1 3/32	6	2.80
17/32	6	1.15	1 1/8	6	2.90
9/16	6	1.20	1 5/32	6	3.00
19/32	6	1.25	1 3/16	6	3.10
5/8	6	1.30	1 7/32	6	3.20
21/32	6	1.40	1 1/4	6	3.30
11/16	6	1.50			

Sizes 1/8 to 1/2 packed 12 of size in carton.
Sizes 17/32 to 1 packed 6 of size in carton.
Sizes 1 1/32 and larger packed singly.

Little Giant Countersinks

54 degree Countersinks are used for Tire Bolts; 82 degree for Plow Bolts, Wood Screws, Machine Screws, etc.

No.	Dia., ins.	Angle, degree	Style of Shank	Each
501	5/8	54°	Bit Brace	.80
502	5/8	54°	½-in. Round	.80
503	5/8	54°	11/16-in. Round	.80
504	5/8	82°	Bit Brace	.80
505	5/8	82°	½-in. Round	.80
506	5/8	82°	11/16-in. Round	.80
508	3/4	54°	½-in. Round	1.05
509	3/4	54°	11/16-in. Round	1.05
512	3/4	82°	½-in. Round	1.05
513	3/4	82°	11/16-in. Round	1.05

No. 13 Drill Set

This set consists of the following sizes No. 114 Bit Stock Drill:

1/16, 3/32, 1/8, 5/32, 3/16, 7/32, 1/4, 5/16, 3/8 inch.

They are put up in a handsome hardwood round box, 2½ inches in diameter and 6½ inches long.

Per set. 4.25

No. 14B Drill Set

This set consists of the following sizes No. 114 Bit Stock Drill:

1/8, 3/32, 3/16, 7/32, 1/4, 5/16, 3/8 inch.

The flat case that goes with this set is covered with a strong leatherette, black in color, gold embossed.

Size 7x3½x¾ inches.

Per set. 4.35

No. 13A Wood Bit Set

This set consists of the following sizes No. 114A Wood Bits:

1/16, 3/32, 1/8, 5/32, 3/16, 7/32, 1/4, 5/16, 3/8 inch.

The round polished hardwood box that goes with this set is 2½ inches in diameter and 8¾ inches long.

Per Set. 4.00

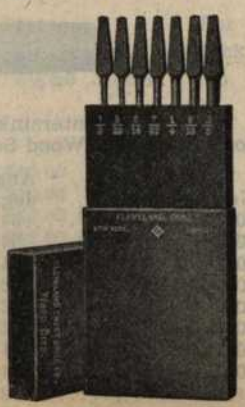
No. 13B Wood Bit Set

This set consists of the following sizes No. 114A Wood Bits:

1/8, 3/32, 3/16, 7/32, 1/4, 5/16, 3/8 inch.

They are put up in an elegant flat case, covered with dark red leatherette and beautifully embossed in gold. Size 8¾x3½x¾ inches.

Per set. 3.70

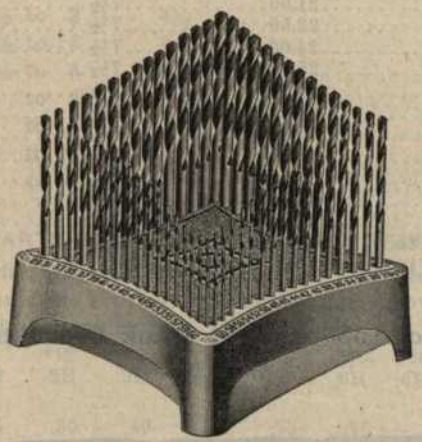


No. 50 Drill Set

Straight shank drills, from 1/16 to ½-inch, inclusive, by 64ths, 29 drills in all. Each drill fits hole corresponding to its size, and arranged by having all 32d sizes on one side, and 64ths on other. Size of each drill is in metal opposite hole. Drills and stand packed separately for shipping.

No. 50 Set—With Stand. . . . . .Each, 16.00
No. 50—Stand only. . . . . .Each, 3.50

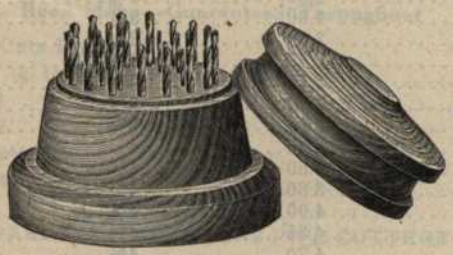
No. 80 Drill Set



Straight shank drills, steel wire gauge, from No. 1 to 60, inclusive. The size drill, fitting each hole, is plainly marked on the stand. All even numbers are placed on one side and odd on other. Drills and stand packed separately for shipping.

No. 80 Set—With Stand. . . . . .Each, 14.35
No. 80M—Stand only. . . . . .Each, 3.50

Cleveland Drill Sets



Mounted on Maple Blocks.
Prices on Sets include the Blocks.

No.	No.	Contains Bits Size, ins.	No. of Bits in Sets	Each
5 Set....	108.....	1/16 to ½ by 64ths.....	29	.....15.00
6 Set....	108.....	1/16 to ½ by 32nds.....	15	..... 9.50
7 Set....	Str't Shk...	No. 1 to 60.....	60	.....15.75
	108.....	¼ to ⅜ by 32nds.....	5	
8 Set....	Str't Sh'k....	No. 1 to 60.....	60	.....13.35
9 Set....	Str't Sh'k..	No. 1 to 59 alternate.	30	..... 2.50
569.....	Blocks only for Nos. 5, 6 and 9.....			8.50
78.....	Blocks only for Nos. 7 and 8.....			2.50

Clark's Expansive Bits

With two cutters.

No.		Cuts, ins.	Wt., ozs.	Each
11	Small Bit	½ to 1½	4	$2.80
12	Large Bit	⅞ to 3	11	$4.20

Packed 6 in a box.

Extra Cutters for Clark's Expansive Bits

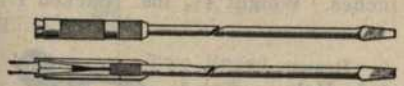
No.	Cuts, ins.	Wt., ozs.	Each
1C	½ to ⅞	1	$0.54
2C	⅞ to 1½	1	$0.54
3C	⅞ to 1¾	1	$0.90
4C	1¾ to 3	1	$0.90
5C	2½ to 4	2	$1.44
6C	3½ to 5	2	$1.80

No. 114A Twist Drills for Wood

Diameter ins.	Length Over All, ins.	Wt. Ozs. Each	Per Dozen
1/16	3½	1	3.25
3/32	4	1	3.25
1/8	4⅝	1	3.25
5/32	5 3/16	1	3.50
3/16	5 11/16	1	4.00
7/32	6⅛	1	4.50
1/4	6 9/16	1	5.00
9/32	7	1⅛	5.50
5/16	7½	1¼	6.00
11/32	7⅞	1½	6.50
3/8	8	1⅝	7.00
13/32	8¼	2	7.50
7/16	8½	2¼	8.00
15/32	8⅝	2½	8.75
1/2	9	3	9.50
17/32	9	3½	10.25
9/16	9⅜	4½	11.00
19/32	9½	4½	11.75
5/8	9⅝	5	12.50
11/16	9⅞	5¾	14.50
3/4	9⅞	7	16.50
13/16	9⅞	7½	18.50
7/8	10	9	21.00
15/16	10	9½	24.00
1	10	11	27.00

Sizes 1/16 to 17/32 packed 12 of size in box.
Sizes 9/16 to 15/16 packed 6 of size in box.
Sizes 1 1/32 and 1 inch packed 3 of size in package.

Extension Bit Holders



Will extend the bit, enabling the user to bore through walls, floors, etc., where the ordinary bit will not reach. Bit socket and shank are of one piece of steel and so constructed that the bit will not work loose while boring. Any length holder will follow up a ⅝ in. bit. Nickel plated.

No. 116—16 in. . . . . Each, 1.90
No. 118—18 in. . . . . Each, 1.95
No. 120—20 in. . . . . Each, 2.00

Packed 6 in a box.

Solid Center Auger Bits

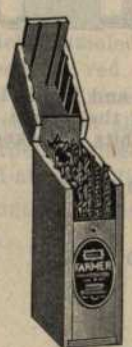
Diameter, ins.	Weight each, ozs.	Per Dozen
3/16	1	4.50
4/16	2	4.00
5/16	2	4.00
6/16	2	4.00
7/16	3	4.50
8/16	3	5.00
9/16	3	5.50
10/16	4	6.00
11/16	5	7.00
12/16	5	7.00
13/16	5	8.00
14/16	6	8.00
15/16	7	9.00
16/16	7	9.00
18/16	8	10.50
20/16	9	12.00

⅜ to 1 inch, ½ doz.; larger, ¼ doz. in a box.

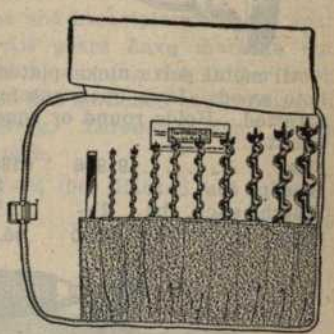
Auger Bit Sets

Solid Center.

Borchest



Borcase

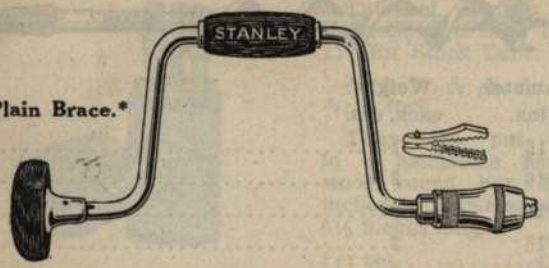


Borkit

These are the solid center auger bits put up in handy sets, for the carpenter, householder or farmer. Three different styles of packages to suit every demand, and in different size sets according to the needs of the purchaser. Orders must specify the number of set wanted and whether to be put in Borcase, Borkit or Borchest container. Prices apply to either style package.

No.	Contains following sizes in 16ths.	Each
11¼	4-5-6-8-10-12	3.00
14	4-6-8-10-12-16	3.50
20½	4-5-6-7-8-10-12-14-16	5.00
32½	4-5-6-7-8-9-10-11-12-13-14-15-16	7.00
25½	4-5-6-7-8-9-10-11-12-14-16	5.95

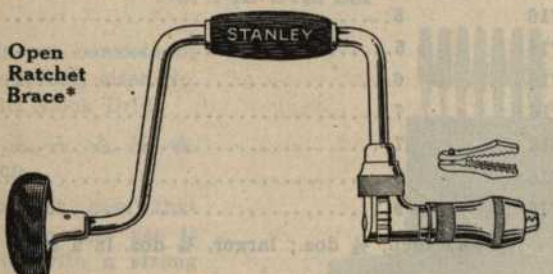
Bit Braces



Plain Brace.*

Steel sweep polished bright; head and handle hardwood, red stained. Packed 6 in a box.

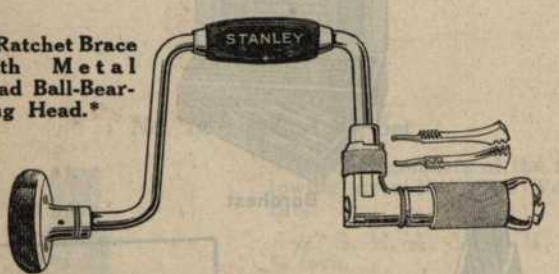
Nos.	96608	96610	96612
Sweep, ins.	8	10	12
Weight each, lbs.	1⅞	1 5/6	2
Each	$1.50	$1.60	$1.70



Open Ratchet Brace*

Has steel sweep, polished heads and knurled nut for regulating ratchet. Packed 6 in a box.

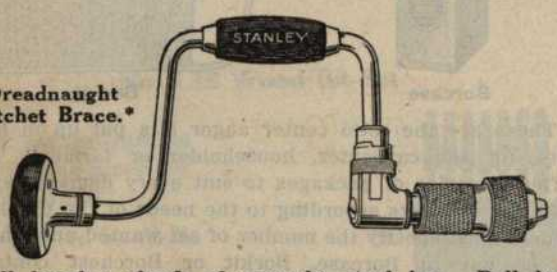
Nos.	96508	96510
Sweep, inches	8	10
Weight each, lbs.	1 5/6	2
Each	$2.50	$2.60



Ratchet Brace with Metal Clad Ball-Bearing Head.*

All metal parts nickel-plated. Handle and head of cocobolo wood. Jaws open automatically as the sleeve is unscrewed. Holds round or square shank bits. Packed 2 in a box.

Nos.	91906	91908	91910	91912	91914
Sweep, ins.	6	8	10	12	14
Weight each, lbs.	2½	2¾	3	3¼	3¾
Each	$6.60	$6.60	$6.80	$7.10	$7.30

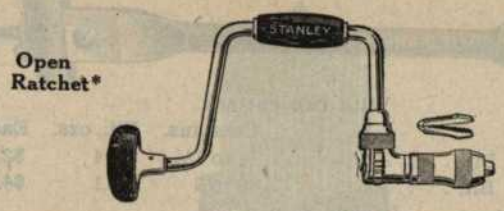


Dreadnaught Ratchet Brace.*

Ball bearing chuck of wrought steel bar. Ball bearing head. Handles of cocobolo. All metal parts nickel plated.

Chuck holds all sizes from ½-inch down to ⅛-inch round twist drills, straight or taper shanks, also all sizes of bit stock shanks. Packed 2 in a box.

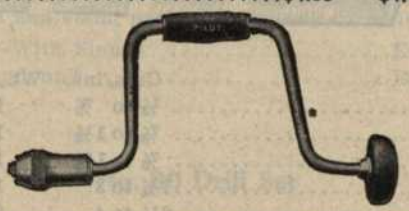
Nos.	81308	81310	81312	81314	81316
Sweep, ins.	8	10	12	14	16
Weight each, lbs.	3	3¼	3¾	4	4¼
Each	$8.10	$8.30	$8.60	$8.80	$9.30



Open Ratchet*

Nickel-plated, machined and hardened alligator jaws, hardwood head and handle. Packed 6 in a box.

Nos.	9458	94510	9451[illegible]
Sweep, inches	8	10	12
Weight each, lbs.	2¼	2½	3
Each	$4.00	$4.10	$4.2[illegible]



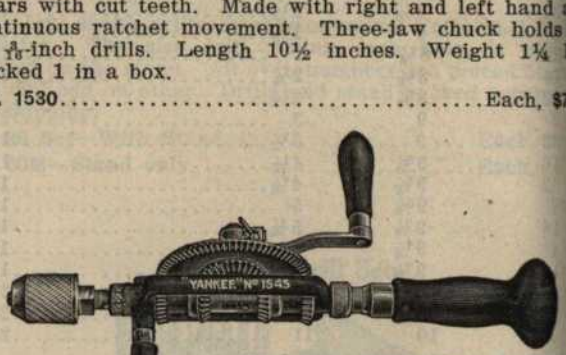
A plain Bit Brace, head of stained wood, plain bearing, stained wood handle. Barber type chuck, alligator type jaws, tumbled finish. 10-inch sweep. Packed 6 in a box. Weight per box 9 lbs.

No. 510B.....Each, $1.2[illegible]

Hand Drills

Malleable iron frame finished in black. Steel spindle. Gears with cut teeth. Made with right and left hand and continuous ratchet movement. Three-jaw chuck holds up to ⅛-inch drills. Length 10½ inches. Weight 1¼ lbs. Packed 1 in a box.

No. 1530.....Each, $7.3[illegible]



Malleable iron frame finished in black. Adjustable ball bearings, steel spindle and machine cut gears. Made with right and left and continuous ratchet movement. Double speed. Three-jaw chuck holds up to ⅜-inch drills. Length 16 inches. Weight 4¼ lbs. Packed 1 in a box.

No. 1545.....Each, $14.0[illegible]

Handle is Brass, white nickeled. Hollow for holding drills.

Frame is Malleable iron, well japanned.

Gears have Cut teeth, nickel plated, pinions are steel.

Chuck is three-jawed; capacity 0 to ⅜ inch. Knurled shell, nickel plated. Holds any twist drill from ⅜₂ inch to No. 80. Extreme length, 10 inches weight, 1 lb. Packed 1 in a box.

No. 49.....Each, $2.8[illegible]

Hand Drills—Cont'd

End handle of solid hardwood with mahogany finish. Malleable iron, black enamaled frame. Large Gear red enameled with machine cut teeth. Steel, nickel-plated, machine cut teeth Pinion. Nickel-plated Chuck, all steel, with three hardened jaws holding round shank drills from 0 to ¼-inch. Weight 1 lb. Packed 1 in a box.

No. 655.....Each, $3.50

Handle is polished Rosewood with a screw cap. Hollow for holding tools.

Frame is malleable iron black enameled.

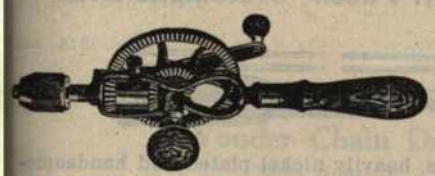
Gears have machine cut teeth. The Gears and Steel Pinion are white nickeled.

Chuck is three-jawed; capacity 0 to ¼ inch. Holds round shank drills. Length 11½ inches. Weight 1½ lbs. Price includes 8 drill points, 1/16 to 1/4 inch. Packed 1 in a box.

No. 379.....Each, $4.90

Frame is aluminum, very light and strong. Gears are machine cut, and held together by a hardened steel guard which prevents slipping without undue friction. Spindle turns on ball bearings. Three-jaw chuck which holds round shank drills up to ⅜ inch. Length 14½ inches. Weight 2 lbs. Packed 1 in a box.

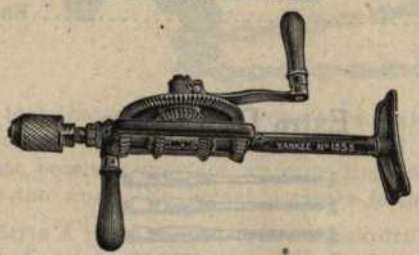
No. 1616.....Each, $7.00



Malleable iron frame, black enameled. Gears are machine cut. Large gear finished in red enamel. Two speeds which are easily changed from one to the other. Spindle turns on ball bearings. Three-jaw chuck holds round shank drills to ⅜ inch. Length 14½ inches. Weight 2¾ lbs. Packed 1 in a box.

No. 5½.....Each, $7.80

Breast Drills

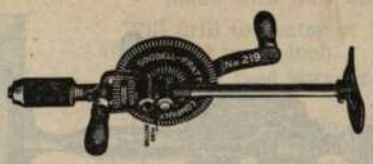


Two Speed
3 Jaw

Has complete ratchet movement. By simply moving shifter from one notch to another five adjustments are instantly available. Plain drive, left hand ratchet, right hand ratchet, continuous ratchet and spindle locked. The continuous ratchet is a great time-saver, as drill turns forward on both backward and forward strokes of crank. Chuck holds up to ½ in. diameter. Side handle has screw driver bit on the end and can be unscrewed and used on all screws of the tool. Length of drill 18 inches. Weight 6½ lbs. Packed 1 in a box.

No. 1555.....Each, $15.80

Breast Drills—Cont'd



Black enameled iron frame and breastplate. Polished steel shank. Large gear finished in red enamel. Two speeds. All teeth are machine cut. Spindle runs on ball bearings. Two-jaw chuck is intended for square shank or bit brace drills only.

Length 16½ inches. Weight 5 lbs. Packed 1 in a box.

No. 219.....Each, $6.50

Black enameled iron frame and breastplate. Polished steel shank. Large gear finished in red enamel. Two speeds. All teeth are machine cut. Spindle runs on ball bearings. Three-jaw chuck holds round shank drills up to ½ inch. Length 16½ inches. Weight 4½ lbs. Packed 1 in a box.

No. 477.....Each, $7.00

Black enameled iron frame and breastplate. Large gear finished in red enamel. All gears have machine cut teeth. Two speeds, changed by turning the shifter knob marked fast or slow. Spindle has hardened end running in a hardened steel cone bearing. Three-jaw chuck holds round shank drills up to ½ inch.

Length 16 inches. Weight 4¼ lbs. Packed 1 in a box.

No. 6.....Each, $8.50

With Two-Jaw Chuck.

For square shank (bit stock) drills. Barber type chuck, alligator jaws. All gears have full-cut teeth. Low speed gear is made of steel. Ball bearing. Breast plate adjustable to any right angle. Two speeds, controlled by one push pin. Nickeled and polished, black enameled baked on frame, breast plate and lever. Handles hardwood, stained and polished. Length 18 inches. Weight 6 lbs. Packed 1 in a box.

No. 1905.....Each, $6.20

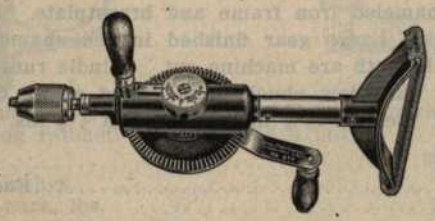
Breast Drills—Cont'd

This Drill has two speeds, changed by shifter, marked "Fast" and "Slow." Has cut tooth gears; the pinions are steel. Ball bearing.

Breast Plate is Saddle design, large and heavy, with leather top, adding much to the ease of operation.

Chuck is three-jawed, holding Round Shank Drills from 0 to ½-inch. Length 18½ inches. Weight 7 lbs. Packed 1 in a box.

No. 20.....Each, $10.60



This is a sturdy and compact Breast Drill with a simple and serviceable ratchet mechanism. Changes of speed and changes of motion are both made by turning the large and conveniently located dial on the back of the frame, giving the following movements: Fast Right Hand Ratchet; Slow Right Hand Ratchet; Fast Direct; Slow Direct.

The breast plate is of saddle design with a broad leather strap; easier on the chest than the old style iron head. The Drill is short, for use in cramped quarters. The frame of this tool is aluminum alloy of ample strength but light weight. It is finished in ebony enamel. The gears and steel pinions have all teeth machine cut from solid blanks. Pinions are inclosed. Large gear is finished in red enamel. The accurately turned steel spindle runs in ball bearings which take up end thrust. The Chuck is all steel, with three hardened jaws for holding Round Shank Drills 0 to ½-inch. Packed 1 in box.

No. 677.....Each, $13.00

Yankee Drill Chucks

Made with ½-inch shank. The body is steel, polished and nickel plated. Jaws are tool steel, hardened. Packed 1 in a box.

No. 1593—For drills ¼ inch and smaller.....Each, $2.40

No. 1594—For drills ⅜ inch and smaller.....Each, $3.10

No. 1595—For drills ½ inch and smaller.....Each, $3.90

No. 41 "Yankee" Automatic Drill

Made of steel and brass, nickel plated and buffed.

Has eight drill points, $\frac{1}{16}$ to 11-64 inches, which are in plain sight when magazine is open. During the return movement of handle the drill point revolves backwards to clear chips, etc. Entire length of tool, inclusive of drill point, is 11⅜ inches Packed 1 in a box.

No. 41.....Each, $3.50

No. 44 "Yankee" Automatic Drill

With Adjustable Tension

Made of steel and brass, nickel plated and buffed.

Has eight drill points, $\frac{1}{16}$ to 11-64 inches in magazine in handle and arranged to show all in plain sight.

Tension of spring is adjusted by turning cap on handle, making it light for small drills or soft wood, and stiff for large drills or hard wood. This saves drills and works better. Entire length of tool, inclusive of drill point, is 11¼ inches. Packed 1 in a box.

No. 44.....Each, $4.30

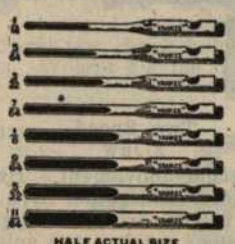
No. 185 "Mr. Punch" Automatic Drill

Hollow brass tubes, heavily nickel plated and handsomely buffed. Handle is knurled entire length, giving a firm grip; contains patented magazine with drill gauge, holding the eight drill points, ranging in size from $\frac{1}{16}$ to $\frac{11}{64}$ inch.

Length without drill points inserted, 10 inches. Packed 1 in a box.

No. 185.....Each, $3.90

Extra Drill Points



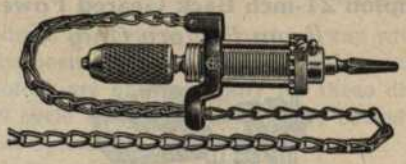
HALF ACTUAL SIZE

For "Yankee" Automatic Drills Nos. 41 or 44. Complete set consists of one each of above sizes.

No. 8Y—Per set of 8.....Each, $1.30

Extra Drills.....Each, $0.16

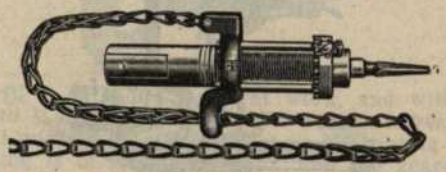
Automatic Chain Drills



Automatic Feed; End Thrust has friction reduced by ball bearings; 3 feet No. AA steel chain.

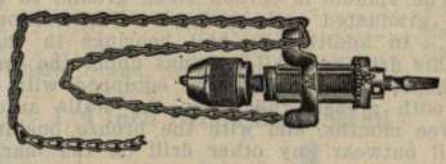
Well made and attractively finished. Holds square and round shank drills. Weight, 2¾ lbs. Packed 1 in a box.

No. 307.....Each, $6.10



Same as No. 307, except the Chuck consists of socket and set screw. Holds ½-in. round shank drills only. Weight, 2¾ lbs. Packed 1 in a box.

No. 308.....Each, $5.10



This tool is in every way identical with Nos. 307 and 308, except the chuck on this drill is a strong three-jawed chuck which holds securely and centers accurately. Holds round straight shank drills from 0 to ½-inch. Weight, 2¾ lbs. Packed 1 in a box.

No. 316.....Each, $6.60

Wonder Chain Drills

Ball Bearing

These tools have chain and yoke to quickly attach to articles of various shapes and sizes. Hand wheel with ball thrust bearings provides an easy method of feeding drill into the work. No breast pressure is necessary.

No. 1 Style A takes ½-inch round shank drills. Weight, 2 lbs. Packed 1 in a box.

No. 2 Style B takes square shank bit stock drills. Weight, 2¼ lbs. Packed 1 in a box.

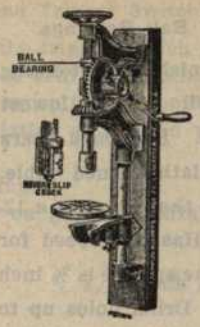
No. 3 Style C fitted with Universal Chuck; will hold $\frac{1}{16}$ to ½-inch round shank bit stock drills. Weight, 2½ lbs. Packed 1 in a box.

No. 1—Style A.....Each, $3.20

No. 2—Style B.....Each, $3.20

No. 3—Style C.....Each, $5.30

Champion Post Drills



Made with Ball Bearings.

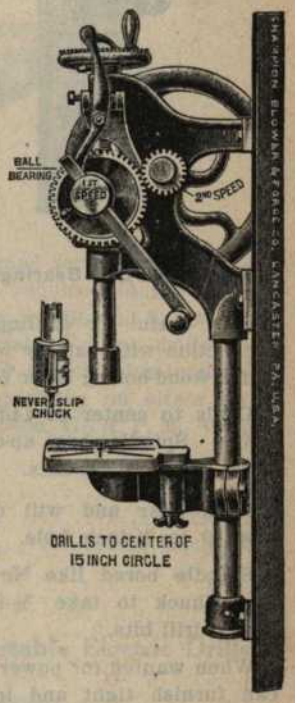
Will drill to center of 12-inch circle and hole 0 to ¾ inch.

Has hand feed without fly wheel or back gearing.

Has a slotted table, planed off on top side. Spindle made of ⅞-inch steel. Has up-and-down run of 3 inches.

Spindle bored like Never-Slip Chuck for ½-inch shank drills. Weight, 60 lbs.

No. 92A.....Each, $17.30



Made with Ball Bearings.

Has full automatic self-feed and full back gear with two speeds to the crank. Drills holes up to 1¼-inch. Diameter of spindle 1⅛-inch. Drills to center of 15-inch circle. Has up-and-down run of 3 inches. Spindle is bored like Never-Slip Chuck to take ½-inch shank drills. Weight, 115 lbs.

No. 93½A.....Each, $33.00

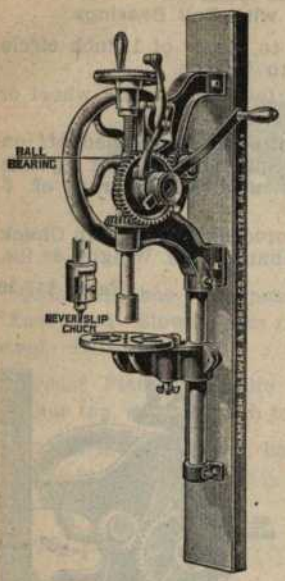
Made with Ball Bearings.

Three-geared. Stout and stocky in design. Has Ball Bearings and third gear to give the second speed the same turning direction of crank as first speed. Has slotted lathe-turned table, full automatic self-feed and full back gears, with two speeds to the crank. Diameter of spindle 1⅛-inch. Drills holes up to 1¼-inch. Drills to center of 15-inch circle. Has up-and-down run of 3 inches. Spindle is bored like Never-Slip Chuck to take ½-inch shank drills.

When wanted for power we can furnish tight and loose Pulleys 6-ins. diam, 2-in. face to run 250 R. P. M.

No.	Power	Weight lbs.	Each
95A.	Hand	120	$38.70
95TA.	T & L Pulleys	125	$47.00

Champion Drills



Made with Ball Bearings.

Built to furnish an Automatic Self-Feed Drill at the lowest price possible. Has back gears with slotted lathe-turned table.

Will drill to the center of a 12-inch circle. Has one speed for the crank. The spindle is ⅞ inch in diameter. Drills holes up to ¾ inch and has up-and-down run of 3 inches.

Spindle is bored like Never-Slip Chuck, for ½-in. shank drills. Hand power. Weight 80 lbs.

No. 101A.....Each, $22.50

Made with Ball Bearings.

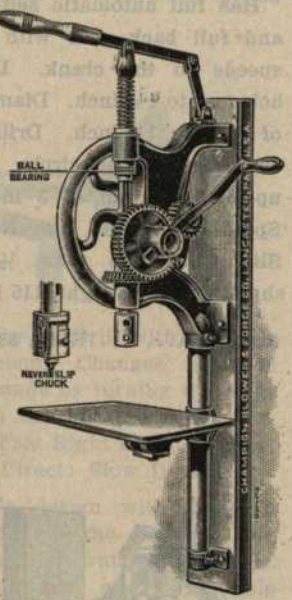
Very useful for drilling in connection with battery work or for wood-boring lever feed.

Drills to center of 14-inch circle. Spindle has up-and-down run of 3½ inches.

Back gear and will drill from 0 to ¾-inch hole.

Spindle bored like Never-Slip Chuck to take ½-inch shank drill bits.

When wanted for power we can furnish tight and loose pulleys 6-ins. diameter, 2-in. face to run 250 R. P. M.



No.	Power	Weight, lbs.	Each
100A	Hand	110	$31.40
100TA	T & L Pulleys	115	$39.60

Made with Ball Bearings.

Automatic Self-Feed and Propeller Wheel Hand Feed and Quick Return.

All Bearings are ground out of solid metal. No babbitt used.

Drills to center of 16½-inch circle. Drills holes from 0 to 1¼ inches.

Has lathe-turned and slotted table.

Spindle, 1⅛ inches in diameter. Has up-and-down run of 5½ inches.

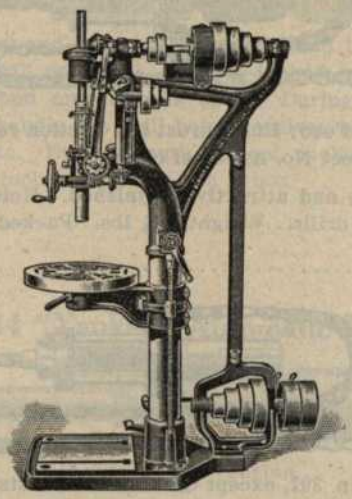
Spindle bored like Champion "Patented" Never-Slip Chuck to take ½-inch shank drills.

When wanted for power we can furnish tight and loose pulleys, 6-in. dia., 2-inch face, to run 250 R. P. M.

No.	Drill Shank	Power	Weight, lbs.	Each
97A	½-in.	Hand	175	$56.00
97B	⅝-in.	Hand	175	$56.00
97TA	½-in.	T & L Pulleys	180	$64.50
97TB	⅝-in.	T & L Pulleys	180	$64.50

Champion 21-inch Back Geared Power Drill

From Factory Only



Constructed to withstand heavy work, as well as being adapted for light, rapid drilling. Built to take in wide range of work, making it the best all-around machine shop, manufacturing or garage drill on the market for general work. The spindle is carbon steel, ground to a micrometer fit, graduated and equipped with frictionless ball bearings. In addition to ball bearings in the spindle thrust, this drill has ball bearings under the crown gear. These thrust ball bearings are equipped with retainers, packed with grease, that keep the walls automatically oiled three months, and with the bronze bushing in the head will outwear any other drill on the market. The brace between the top and bottom countershaft stiffens the drill, so that when the heaviest work is done, both the upper and lower cone pulleys are held rigidly in position. Has 3 feeds—lever feed, wheel feed and power feed; with 3 speeds on the power feed, 8 spindle speeds—changed from plain drill to back-geared drill by merely sliding the back gears in with lever attached. The automatic stop will knock off the power feed at any desired depth; the spindle being graduated so that any hole 12 inches deep down to any fraction of an inch can be drilled without measuring the depth of the hole. Quick-return handle gives rapid movement to the spindle. The spindle is counterbalanced with weight in hollow column, connected by cable chain all enclosed. The gears are covered with guards and worm gear on power feed runs in a continuous bath of oil. This drill is adapted for automobile repair shops, as it will rebore any type or size of automobile or tractor cylinder with one setting of the motor.

Swings to center of 21-inch circle.
Height of Drill 77 inches.
Column diameter 5¼ inches.
Table diameter 16 inches.
Vertical travel on column 21 inches.
Spindle diameter in sleeve $1\frac{7}{16}$ inches.
Spindle travel 12 inches.
Distance between table and spindle 27½ inches.
Distance between spindle and base 43 inches.
Distance from column to center of spindle 10½ inches.
Power Feeds per revolution of spindle for various cone steps on power feed .002, .005, .008.
Size of tight and loose pulleys 8x2¾ inches.
Size of cone pulleys (4 step) 4, 5¾, 7½, 9 x 2-inch face.
Speed of driving pulley 300 R. P. M.
Hole in spindle bored to fit No. 4 Morse Taper.
Base has T slots.
Capacity—Drills 0 to 1½ inches.
Floor space 16 inches x 44 inches.
H. P. required—1 H. P.
Weight 915 lbs.

Champion 21-inch Back Geared Power Drill..Each, $200.00

Black & Decker Electric Tools

"With the Pistol Grip and Trigger Switch"

These drills are held in the natural way with forefinger on the trigger, which gives perfect control at all times without changing the position of either hand. This patented control saves drill bits and has made the tool a general favorite.

The motors are built specially for these drills. They are exceptionally powerful and operate on any current from direct to 60 cycle alternating. They are cooled by forced circulation of air and will not over-heat under the most severe conditions of operation.

The spindle on B. & D. drills is offset for close corner drilling.

Gears are cut from special steel, heat treated and mounted on ground shafts. Gears run in grease in separate compartment like an automobile transmission.

1/4 Inch Bench Drill Stand

This drill is intended for light work, and will handle drills up to ¼ inch. It is equipped with universal motor, which will operate on either direct or alternating current. The housing is of aluminum alloy, and the gears are of the same high grade steel as on the larger sizes.

This drill is especially desirable for all around light work because of its size, and it weighs only 5 pounds.

We can also furnish this drill with a base for attaching it solidly to a bench to use as a bench grinder. No-load speed, 2000 R. P. M. Weight, 5 lbs. Shipping weight, 7 lbs.

110 Volts. . . . . Each, 28.00
220 Volts. . . . . Each, 32.00
32 Volts. . . . . Each, 32.00
Grinding Outfit, Stand, Arbor and Wheel extra. 3.00

1/4 Inch Bench Drill Stand

Fits the Black & Decker ¼ in. Drill. Vertical adjustment of Drill 10 inches, with 2-inch feed by the hand lever from any position. Any customer who has purchased a ¼-inch Drill should have one of these ¼-inch Bench Drill Stands. Weight, 14 lbs. Shipping weight, 20 lbs.

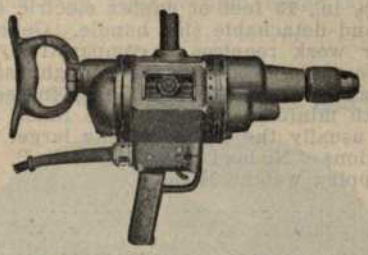
¼ Inch Bench Drill Stand. . . . . Each, 12.00

3/8 Inch Portable Electric Drill

Complete with combination spade handle and breast plate, three-jaw chuck for straight shank drills, 15 feet duplex electric cable and separable attachment plug. No load speed, 900 R. P. M. Weight, 14 lbs. Shipping weight, 26 lbs.

110 Volts. . . . . Each, 68.00
220 Volts. . . . . Each, 72.00
32 Volts. . . . . Each, 72.00

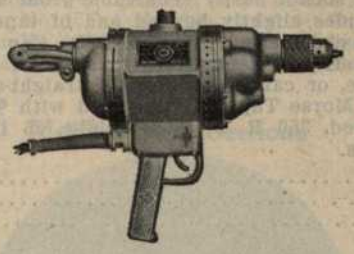
1/2 Inch Special Portable Electric Drill



This drill is particularly designed for garage work and will handle almost any drilling required in the average garage. With combination spade handle and breast plate, three-jaw gear nut chuck for straight shank drills up to ½ in. It has the trigger control switch, aluminum alloy housing and universal motor, operating on either direct or alternating current. No load speed, 475 R. P. M. Weight, 15 lbs. Shipping weight, 27 lbs.

110 Volts. . . . . Each, 58.00
220 Volts. . . . . Each, 62.00
32 Volts. . . . . Each, 62.00

1/2 Inch Heavy Duty Portable Electric Drills



Complete with combination spade handle and breast plate, three-jaw chuck for straight shank drills up to ½-inch, 15 feet duplex electric cable, separable attachment plug and detachable side handle. No load speed 600 R. P. M. Weight, 21½ lbs. Shipping weight, 33 lbs.

110 Volts. . . . . Each, 78.00
220 Volts. . . . . Each, 82.00
32 Volts. . . . . Each, 82.00

WE ARE NOW IN POSITION TO SELL THESE TOOLS ON MONTHLY PAYMENT PLAN TO THOSE WHO WISH TO USE IT. FULL INFORMATION ON REQUEST.

Black & Decker Electric Tools—Continued

5/8 Inch Portable Electric Drill

Drill complete with combination spade handle and breast plate, three-jaw geared-nut chuck for straight shank drill bits up to ⅝ in., 15 feet of duplex electric cable, attachment plug and detachable side handle. General auto and truck repair work requires a comparatively slow speed drill, because of the ever increasing toughness of the steel that is being used on autos and trucks in order to secure strength with minimum weight. The Black & Decker ⅝ in. Drill is usually the choice of the larger garages and service stations. No-load speed, 475 R. P. M. Weight, 22 lbs. Shipping weight 34 lbs.

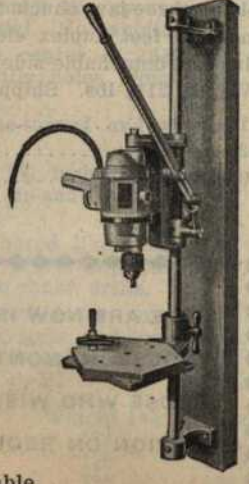
110 Volts. . . . . Each, 84.00
220 Volts. . . . . Each, 88.00
32 Volts. . . . . Each, 88.00

7/8 Inch Portable Electric Drill

Drill complete with combination spade handle and breast plate, No. 2 Morse Taper Socket for taper-shank drill bits from $\frac{31}{64}$ inch to ⅞ inch, 15 feet of duplex electric cable, attachment plug and detachable side handle. The No. 2 Morse Taper Socket, in the form of a removable sleeve, is secured in the drill spindle by means of a large knurled nut, making socket easily removable from spindle. Drill shank protrudes slightly beyond end of taper socket and light tap on end frees it from socket. Can be used with No. 1 Morse Taper-Shank Bits by using No. 1 to 2 Morse Taper Sleeve, or can be used with straight-shank bits by using No. 2 Morse Taper Arbor fitted with ⅝ inch chuck. No load speed, 350 R. P. M. Weight, 25 lbs. Shipping weight 35 lbs.

110 Volts. . . . . Each, 125.00
220 Volts. . . . . Each, 129.00
32 Volts. . . . . Each 129.00

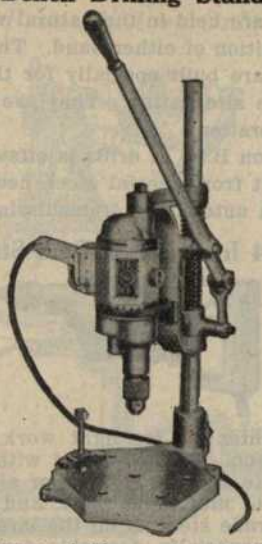
Post Drilling Stand



Takes ⅜-inch, Special ½-inch, Heavy Duty ½-inch, $\frac{9}{16}$-inch, ⅝-inch, and ⅞-inch Black & Decker Portable Electric Drills. Stand furnished with adapter for Black & Decker Drill, work-clamp and stud and 4 lag screws. Drill not included. Board measures 1¾x 5½x52 inches. Has 25½-inch vertical adjustment and drills to center of 14-inch circle. Be sure and specify size and type shown on the name plate of your drill so that proper adapter may be supplied with stand. Net weight of stand without drill, 75 lbs. Shipping weight, 135 lbs.

Post Drilling Stand without Portable Electric Drill. . . . . Each, 32.00

Bench Drilling Stand



This stand makes a rigid, serviceable Drill Press out of a Black & Decker Portable Electric Drill in a few seconds. It takes ⅜-inch, ½-inch, $\frac{9}{16}$-inch, ⅝-inch and ⅞-inch Black & Decker Portable Electric Drills.

Practically the same as the Post Drilling Stand except intended for a bench in place of a post.

Be sure to specify the size and type shown on nameplate of your Drill so that proper adapter may be supplied with stand.

Net weight of Stand without drill, 50 lbs. Shipping weight, 83 lbs.

Bench Drilling Stand without Portable Electric Drill. . . . . Each, 28.00

Portable Electric Grinders

Motor and general construction same as Electric Drills

Complete with 15 ft. of duplex electric cable with attachment plug, grinding wheel and wheel guard, except 4 in. Grinder which is supplied without wheel guard.

Size	Size Grinding Wheel	No Load Speed	Weight	Price 110 Volt	Price 220 or 320 Volts
4-in.	4x½x½	3500 R. P. M.	15 lbs.	60.00	64.00
5-in.	5x¾x½	3400 R. P. M.	27 lbs.	80.00	84.00
6-in.	6x 1 x⅝	2900 R. P. M.	33 lbs.	90.00	94.00

No. 1 Electric Valve Grinder

Valve Grinder complete with 15 feet duplex electric cable, attachment plug, detachable bits, lift spring and box of grinding compound. Same design and construction in all essentials as the portable electric drills, except that the spindle oscillates back and forth instead of revolving, this motion being obtained by means of a connecting rod, not with a cam or scotch yoke. Equipped with the "Pistol Grip and Trigger Switch," giving the same perfect control speed (oscillations per minute) 500. Weight, 6 lbs. Shipping weight, 8 lbs.

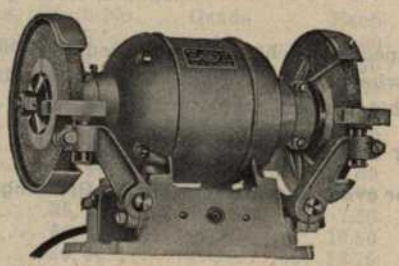
110 Volt. . . . . Each, 34.00
220 Volts. . . . . Each, 38.00
32 Volts. . . . . Each, 38.00

6-Inch Black and Decker Electric Bench Grinder

Complete with two grinding wheels, one coarse and one fine, two wheel guards, two tool rests, electric cable fitted with attachment plug and electric switch. This grinder has not a universal motor and current must be specified. Supplied for D. C. or A. C. Single Phase 40, 50 or 60 cycles. This is a substantial two-wheel Electric Bench Grinder, provided with rubber pads and a carrying handle, making it particularly convenient for moving about. ¼ horsepower, 3600 R. P. M. Totally enclosed to keep out abrasive dust. Attractively finished in gray enamel. Can be connected to an ordinary electric light lamp socket and is shipped complete ready to run. Size of wheels 6 in. diameter by ½ in. face by ½ in. hole. No-load speed 3600 R. P. M. Weight, 38 lbs. Shipping weight, 50 lbs.

110 Volts, 60 Cycle A. C. .....Each, 38.00
110 Volts, 25, 40 or 50 Cycle A. C.....Each, 42.00
220 Volts, 60 Cycle A. C. .....Each, 42.00
110, 220 or 32 Volts, D. C. .....Each, 42.00

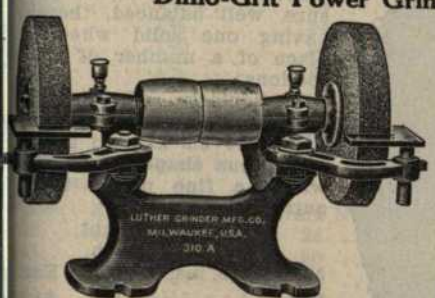
8-Inch Black and Decker Electric Bench Grinder



Complete with two 8-inch grinding wheels, one coarse and one fine, two wheel guards, two adjustable tool rests and switch in base. This Grinder has not a universal motor and current must be specified. Supplied for D. C. or single phase 25, 40, 50 or 60 cycle A. C. This is an exceptionally husky heavy-duty Electric Bench Grinder. One-half horsepower, 3600 R. P. M. Totally enclosed to keep out abrasive dust. Attractively finished in gray enamel. Size of grinding wheels 8 in. diameter x ¾ in. face x ⅝ in. hole. No-load speed, 3600 R. P. M. Weight 75 lbs. Shipping weight 105 lbs.

110 Volt 60 cycle A. C. .....Each, 90.00
110 Volt 25, 40 or 50 cycle A. C.....Each, 94.00
220 Volt 60 cycle A. C. .....Each, 94.00
110 Volt or 220 Volt D. C. .....Each, 94.00
Pedestal only, as illustrated, for 110 volt 60 cycle A. C.....Each, 18.00

Dimo-Grit Power Grinders



Recommended for general use In machine shops, garages and farms. Broad heavy base, adjustable tool rests, oil cups and overhanging flanges, babbitted bearings, 2½x2½-inch pulleys. Recommended speed 2000 R. P. M.

Furnished with two Dimo-Grit wheels, one medium and one coarse, and two work rests.

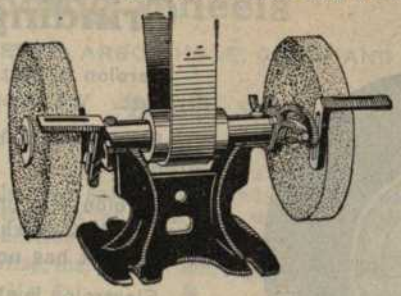
No. 310 is equipped with a tight and loose pulley.

No. 309 is equipped with a tight pulley only.

We can also furnish an attachment for sharpening sickles and discs. Refer to page 227.

310. . . . . 7x1¼ . . . . . 40 . . . . . 17.00
309. . . . . 7x1¼ . . . . . 39 . . . . . 16.00

No. 306 Dimo-Grit Power Grinders



A very substantial grinder for light work. The bearings are plain and are bored and reamed in solid metal. The shaft is of steel accurately machined, finished and fitted. Equipped with one tight pulley. It has two Dimo-Grit wheels, one medium and one coarse, and two adjustable work rests. Weight, boxed,13 lbs.

No. 306. . . . . Each, 8.00

Economy Wire Wheel Brushes and Hubs

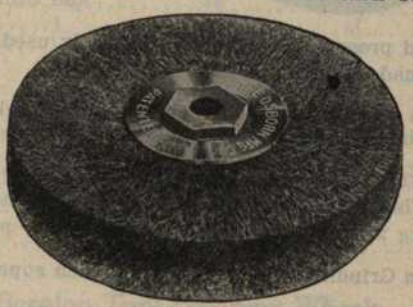


Illustration Shows Hub and Brush Complete

Interlocking Economy Hubs Mal. Iron

No.	Dia. Hub	Width Face	Dia. Section	For Section No.	Hubs Only, Each
155	5-in.	2 -in.	12-in.	3411	$7.00
155A.	5-in.	1¾-in.	10-in.	358	$7.00
144	4-in.	1½-in.	8-in.	364	$4.00

When ordering, state if complete hub and brush is wanted and size of arbor hole required.

Economy Steel Wire Sections or Fillers

Sections or fillers for hubs can be furnished as follows:

No. 3411—(For No. 155) Number in set 5..Per Set, $14.00
No. 358—(For No. 155A) Number in set 5..Per Set, $11.00
No. 364—(For No. 144) Number in set 4..Per Set, $ 8.60

Monitor Wire Sections

"Monitor" Sections provide a convenient and practical method of building a wheel of any desired width of face without the use of a hub. Each section is a complete wheel in itself and can be mounted directly on the shaft or spindle. The Wire Brush part is formed on a continuous stem and encased between two steel discs, securely welded together, and having broad contacts. No hubs are necessary. When ordering, please state size of arbor hole.

No.	Diam.	Diam. Face Plates	Per Section
3444	12 in.	5 in.	$4.40
3532	10 in.	5 in.	$3.80
3616	8 in.	4 in.	$2.80

Grinding Wheels

Borolon is best adapted for all kinds of Steel and Materials of High Tensile Strength. We recommend it for all general purpose work.

Electrolon is best suited for Cast Iron and all materials of Low Tensile Strength.

Borolon is a product of the Electric Furnace. It is free from impurities and when made into wheels gives the maximum cutting efficiency for the least amount of wear. It has no superior in grinding steel.

Electrolon is also a product of the Electric Furnace. It is made from materials that produce a fast cutting wheel. It is the hardest known abrasive, yet possesses the brittleness which makes it very efficient for grinding materials of low tensile strength, such as Cast Iron, Brass, Bronze, Marble, Granite, etc.

Borolon and Electrolon Grinding Wheels are made by two processes, Vitrified and Silicate.

Vitrified process is the most commonly used. It makes the fastest cutting wheel known. Our entire stock of Grinding Wheels is made by this process.

Silicate process is used for certain special wheels, such as knife sharpening and surface work. All wheels over 30 inches in diameter are made by this process.

All Borolon and Electrolon Grinding Wheels are tested in special machines at a speed of 9,000 periphery feet per minute. This exerts a strain of 250 lbs. per sq. inch on the wheel. The average strain on a grinding wheel in actual use, running at highest speed, is about 90 lbs. per sq. inch. This assures ample margin of safety for the user.

Borolon Grinding Wheels are very much superior to Emery or Corundum Wheels.

We are prepared to furnish Borolon or Electrolon Wheels for every purpose for which a Grinding Wheel might possibly be used and guarantee satisfaction.

Grade

Grade means the hardness of a wheel, or the resistance of the cutting particles under grinding pressure. A soft wheel is one where the cutting particles break away very rapidly under grinding pressure. A hard wheel will retain its cutting particles longer. The various steps or degrees of hardness from soft to hard are designated by letters. The ideal wheel for any work is one that furnishes a new cutting face as fast as the particles in use become dull; in other words, the proper wheel will not glaze, but will remain sharp.

Grain

The size or number of abrasive used is termed the wheel's degree of coarseness or fineness. The material after being crushed is graded to different sizes. These numbers are determined by the sieve or screen through which the material passes. No. 20, for instance, is that which passes through a sieve which has twenty meshes to the linear inch. No. 30, thirty meshes; No. 60, sixty meshes, etc. The degree of coarseness usually runs from about No. 8 to about No. 200.

Fine grades are known as Flours, but these are seldom used in wheels, being used mostly for rubbing and sharpening stones for very fine work.

Abrasive Grade List

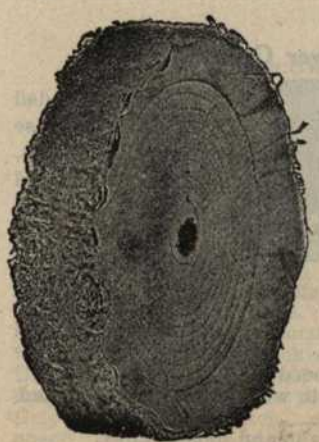
The following grade list is used in designating hardness of silicate and vitrified wheels:

H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Very Soft.			Soft.		Medium.		Med. Hard.		Hard.			Very Hard.					Extremely Hard.	

Each letter represents a grade harder than the preceding letters, the words soft, medium, etc., being only comparative and intended only for general guidance.

Elastic wheels are graded as follows: 1, 1½, 2, 2½, 3, 3½, 4, 5, 6, 7; grade No. 1 being the softest and No. 7 the hardest.

Muslin Cloth Polishing Wheels**



Manufactured from discs of muslin cloth, stitched from center to periphery. Made in sections same as Buffs, cemented under hydraulic pressure, well balanced, thereby having one solid wheel in place of a number of loose sections.

Particularly adapted for polishing plow shares, farm tools, shovels and all metals of various shapes, especially where a fine polish is required.

No.	Size, ins.	Weight, each, lbs.	Each
P10	1 x 6	¾	$1.80
P11	1 x 8	1¼	$2.00
P12	2 x 8	2½	$4.00
P13	2 x10	4¼	$4.20
P14	2 x12	5½	$6.00
P15	2½x 8	3½	$4.80
P16	2½x10	5	$5.00
P17	2½x12	7	$7.20

For sizes and grades carried in stock, see next page.

Stock Sizes Grinding Wheels

IN ORDERING, SPECIFY THICKNESS, DIAMETER, ARBOR HOLE, GRAIN AND GRADE.

We regularly furnish the size arbor hole listed unless otherwise specified.

If specially ordered, we can ship from stock without extra charge arbor holes as follows:

All 6 and 8-inch wheels 1¼-inch hole and less.

All 10-inch and larger wheels 1½-inch hole and less.

Larger arbor holes are special and furnished from factory only.

Borolon General Purpose Grinding Wheels

Square Face

Borolon General Purpose Wheels are particularly adapted for general machine shop use, but are not adapted for plow work.

Specify Grain Number

Size, ins.	Arbor hole, ins.	Grain No.	Grade	Each
½x 6	¾	46	O	2.90
¾x 6	¾	46	O	3.50
¾x 8	1	46	O	5.30
1 x 6	¾	36, 46	O	4.10
1 x 8	1	36, 46	O	6.25
1 x10	1¼	36, 46	O	9.00
1 x12	1¼	36, 46	O	11.50
1¼x 6	¾	36, 46	O	4.70
1¼x 8	1	36, 46	O	7.25
1¼x10	1¼	36, 46	O	10.50
1¼x12	1¼	36, 46	O	13.75
1½x 8	1	36, 46	O	8.30
1½x10	1¼	36, 46	O	12.25
1½x12	1¼	36, 46	O	15.75
2 x10	1¼	36	O	15.75
2 x12	1¼	30	P	20.00
2 x14	1¼	30	P	27.15
2 x16	1¼	30	P	35.70
2½x12	1¼	30	P	24.75
2½x14	1¼	30	P	33.60
2½x16	1¼	30	P	43.55

Borolon Plow Grinding Wheels

Square Face

Borolon Plow Grinding Wheels are without an equal for this particular purpose. "Once tried—always used."

Size, ins.	Arbor hole, ins.	Grain No.	Grade	Each
1½x10	1¼	30	P	12.25
1½x12	1¼	30	P	15.75
1½x14	1¼	30	P	21.20
2 x10	1¼	30	P	15.75
2 x12	1¼	24	P	20.00
2 x14	1¼	24	P	27.15
2 x16	1¼	24	P	35.70
2½x12	1¼	24	P	24.75
2½x14	1¼	24	P	33.60
2½x16	1¼	24	P	43.55

Electrolon Grinding Wheels

Especially adapted to grinding Cast Iron, Brass, Bronze and Aluminum.

Size, ins.	Arbor hole, ins.	Grain No.	Grade	Each
2 x12	1¼	24	R	20.00
2 x14	1¼	20	R	27.15
2½x12	1¼	24	R	24.75
2½x14	1¼	20	R	33.60

Special Shape Grinding Wheels

We can furnish Borolon or Electrolon Grinding Wheels for shipment direct from the factory in all shapes, sizes and grades to meet every purpose for which a grinding wheel may be used. In ordering special wheels, the work for which they are to be used must be specified.

Borolon Saw Gumming Wheels

Round Face

Borolon Saw Gummers cut fast and free and will not case-harden saw teeth. They may be used for wood workers' tools or any purpose where a soft free-cutting wheel is desired.

Size, ins.	Arbor hole, ins.	Grain No.	Grade	Each
¼x 6	¾	60	M	2.30
¼x 8	1	60	M	3.25
¼x10	1¼	60	M	4.30
⅜x 6	¾	60	M	2.60
⅜x 8	1	60	M	3.75
⅜x10	1¼	46	M	5.15
⅜x12	1¼	46	M	6.20
½x 6	¾	46	M	2.90
½x 8	1	46	M	4.25
½x10	1¼	46	M	5.90
½x12	1¼	46	M	7.25
⅝x 6	¾	46	M	3.20
⅝x 8	1	46	M	4.75
⅝x10	1¼	46	M	6.70
⅝x12	1¼	46	M	8.25
¾x 6	¾	46	M	3.50
¾x 8	1	46	M	5.30
¾x10	1¼	46	M	7.45
¾x12	1¼	46	M	9.35

Borolon Tool Grinding Wheels

Square Face

Borolon Tool Grinding Wheels cut fast and free and are particularly adapted for sharpening small tools and drills.

Specify Grain Number

Size, ins.	Arbor hole, ins.	Grain No.	Grade	Each
¾x 6	¾	60	N	3.50
¾x 8	1	60	N	5.30
1 x 6	¾	60	N	4.10
1 x 8	1	60	N	6.25
1 x10	1¼	46, 60	N	9.00
1 x12	1¼	46, 60	N	11.50
1½x 8	1	46, 60	N	8.30
1½x10	1¼	46, 60	N	12.25
1½x12	1¼	46, 60	N	15.75
1½x14	1¼	46, 60	N	21.20
2 x10	1¼	46, 60	N	15.75
2 x12	1¼	46, 60	N	20.00
2 x14	1¼	46, 60	N	27.15

Electrolon Cylinder Grinding Wheels

Electrolon Cylinder Grinding Wheels are especially adapted to grinding out cast iron cylinders. Adapted for Heald, Landis, Metro and other cylinder grinding machines.

Size, ins.	Arbor hole, ins.	Grain No.	Grade	Each
⅜x3½	¾	36	J	1.30
⅜x3½	¾	46	J	1.30
½x4	¾	36	I	1.70
½x4	¾	46	H	1.70
¾x3½	¾	36	H	1.70
¾x3½	¾	46	G	1.70
¾x4	¾	36	H	2.00
¾x4	¾	46	G	2.00

Be sure and specify name and number of machine on which wheel is to be used.

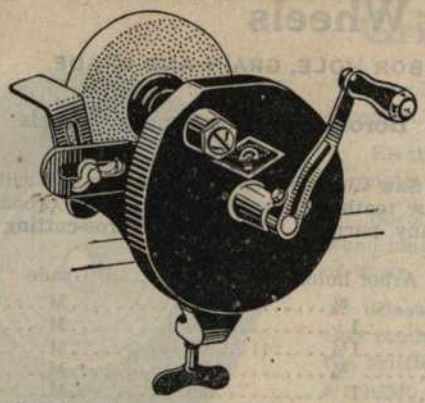
Borolon Grinding Wheels

Formerly called Boro-Carbone.

Particularly adapted to internal grinding, tool post grinders, such as Dumore, etc. Generally used on portable electric grinding machines.

Size, Ins.	Arbor Hole, Ins.	Grain No.	Grade	Each
¼ x ¾	¼	50	K	.55
¼ x 1	¼	50	K	.55
⅜ x 1¼	¼	50	K	.70
⅜ x 1½	¼	50	K	.70
⅜ x 2	¼	50	K	.90

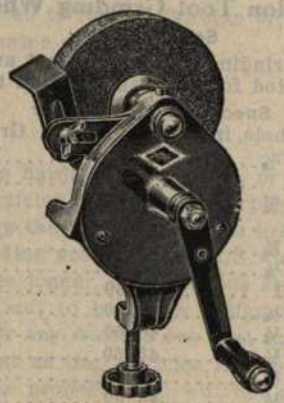
Mechanic Special Grinders



An excellent line of tool sharpeners made for the particular carpenter or mechanic, garage owners and for general all-around tool sharpening. Equipped with plain tool rests. Attachments for sharpening chisels, planes, power attachment if desired at extra cost. Finish, Gray Enamel by special process.

No.	Wheels, ins.	Wt. boxed, lbs.	Each
14	4 x 1	10	7.00
15	5 x 1	15	8.50
16	6 x 1	21½	11.00
17	7 x 1¼	36	15.00

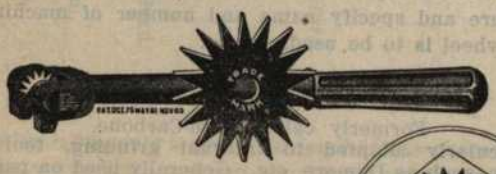
Standard Grinders



A well built, low priced line of Hand Grinders, suitable for general all around use in the home work shop, small shop or garage. Helical cut gear and pinion, heavy one-piece case, cast iron back, oil cup, machined tool rest and overhanging flange. Regular equipment consists of vitrified Dimo-Grit wheel of medium grit and adjustable work rest. Finish—Blue Body, Red Flange, and Black Handle.

No.	Wheel, ins.	Wt. Boxed, lbs.	Each
24	4 x 1	6½	3.50
25	5 x 1	7	4.00
26	6 x 1	14	5.50
27	7 x 1	16	6.50

Emery Wheel Dressers



No. 2018—Complete with 2 sets of cutters.....Each, $1.30

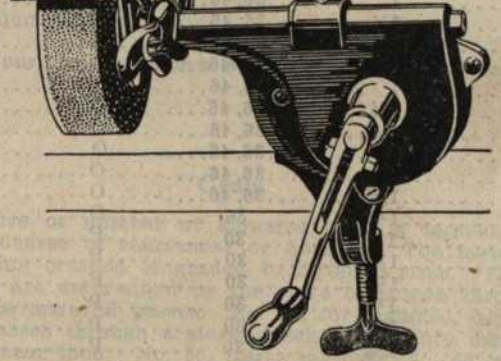
No. 2019—Extra Cutters. . .....Per set, $0.16

Domestic Grinder

Designed especially for household use. Is easy to operate—every housewife can sharpen knives, shears and other utensils. Helical cut gear and pinion, one-piece case, gray iron back, large and heavy case and handle. Fine cutting wheel 4x¾-inch, and heavily constructed combination knife and shear guide. Weight boxed 4¾ lbs. Finish—Blue Body, Red Flange and Black Handle.

No. 34.....Each, 2.00

Best Maide Grinder



Equipped with 5x1½-inch double grit Dimo-Grit wheel with medium body and extra fine face. Improved swiveling device by which it can be swiveled to any angle. Adjustable tool rests, wide bearings, extra wide driving gear and rigid frame. Adjustable ball bearings, worm gear and runs in oil, which automatically oils every bearing. Finish, Black Enamel. Weight boxed, 14¾ lbs.

No. 51.....Each, 10.50

Dimo-Grit Grinder

An all-around, well-built Tool Grinder. Used for sharpening shears, knives, axes and other tools. Has 6x1⅜ inch Dimo-Grit stone. Furnished with special sickle holding device which is adjusted to either side of grinder, allowing any bevel to be given. Grinding on flat side of wheel insures a straight cutting edge from the point to the heel of the sickle section. Finish, Black Enamel. Weight boxed, 28 lbs.

No. 86.....Each, 10.00

Luther Sickle Grinders

This machine is a simple, compact and serviceable hand-power sickle grinder especially suited to farm work. It can be clamped to any mower wheel or bench.

The driving mechanism consists of a bevel gear and two spur gears, which give a simple transmission of power. The sickle-holding attachment will take a mower or binder knife of any make. The sickle grinding wheel is of Dimo-Grit, barrel shaped, and will give to any sickle the same bevel the sections had when new. Finish, Black Enamel. Weight boxed, 22 lbs.

No. 82.....Each, 6.50

These models are designed particularly for the farmer who wants a good hand-operated sickle and tool grinder at low price. They are heavily constructed and ribbed to eliminate breakage. Ball bearings eliminate friction, and provision is made to take up end play in the grinding wheel shaft. Helical cut gear, one-piece case, and heavily constructed sickle holder are excellent features of these two machines.

No. 84 carries a 3½x3½x½ sickle cone and sickle holding attachment.

No. 85 carries same equipment and in addition a 4-inch medium tool wheel. Finish, Black Enamel. Weight boxed, No. 84, 10 lbs.; No. 85, 12 lbs.

No. 84.....Each, 7.00
No. 85.....Each, 8.00

Combination Sickle and Disc Attachment

This attachment is especially intended for use with No. Grinder shown on page 223. It can also be used with other grinders of same construction. It affords the most simple and modern method of sharpening sickles and discs. The sickle is sharpened on the flat side or face of the wheel. Attachment will hold any disc from 14 to 28 inches in diameter. Attachment can be easily adjusted to sharpen any section clear down to bar. Sharpening can be done on either grinding wheel. Finish, Black Enamel. Weight, boxed, 6 lbs.

No. 925AC.....Each, 5.00

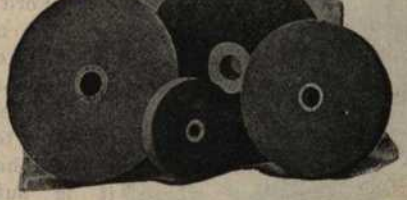
Hummer Grinder

Without question the most popular foot power grinder on the market. Has steel shaft drive, enclosed dust-proof bearings, beveled cut gears, channel iron frame, adjustable seat. Head can be swiveled to any angle. Equipped with sickle and disc attachment, two universal tool rests and two genuine Dimo-Grit wheels, one medium and one coarse, size 6x1¼ inches. Height over all 42 inches. Finish, Black Enamel. Weight packed, 76 lbs.

No. 271.....Each, 30.00

Extra Tool Grinding Wheels

For Luther Grinders

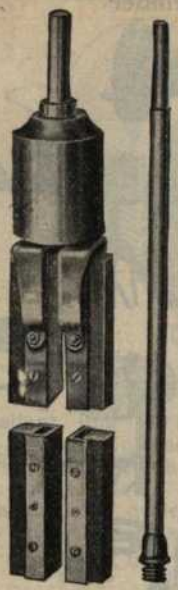


No. 5100	—5x1½x$\frac{7}{8}$.	Stone for No. 51 Best Maide..$6.40
No. 2710M	—6x1¼x1.	Medium Stone for No. 271....$4.60
No. 2710C	—6x1¼x1.	Coarse Stone for No. 271.....$4.60
No. 2640	—4x1¼x½.	Tool Stone for No. 264 Best Maide.....$3.80
No. 400	—4x1 x1.	Stone for No. 14.....$2.20
No. 500	—5x1 x1.	Stone for No. 15.....$2.70
No. 600	—6x1 x1.	Stone for No. 16.....$3.80
No. 700	—7x1¼x1.	Stone for No. 17.....$5.30

Extra Stones for Sickle Grinders

This stone is of regular double bevel shape, 3½ inches long, 3½ inches in diameter. Medium grit Carborundum. It has an iron bushing with ½-inch hole. Iron bushing has hole in end for cotter pin. It will fit any sickle grinder having ½-inch shaft, where stone is fastened with cotter key.

No. 8011.....Each, $2.00



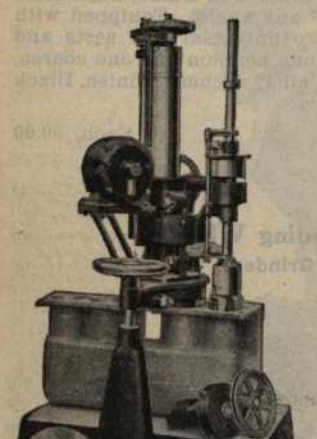
Storm Cylinder Hone

An ideal tool for grinding or honing cylinders after reaming, reboring or ot machining operations. It is also used for correcting cylinders that have worn sligh tapered or have become rough where .0025, .003 or similar small oversize pistons are be installed. It is a precision tool scientifically constructed to give perfect s centering and balancing action under all conditions and for all sizes. Provided wit center tension spring mounted on an adjustable spring retainer. Assembly is adjusta so that proper tension is instantly obtained for different sized cylinders. Its princi features are: Speed and efficiency in operation—perfect "Gun Barrel Finish" produc —wide range of capacity—proper grinding tension for any and all diameters—absol self-centering and perfect balance of pressure. This Head is used on all models Stormizing Machines and the Storm Cylinder Finishing Machine. Heads can supplied with either straight or tapered shank for use with Electric Drill or D Press. The absolute self-centering feature, the equalized tension and wide range capacity make it superior to others for this purpose, but because of the more or l irregular feed, which is unavoidable when using any tool in connection with Drill Drill Press the accuracy and finish will not be as perfect as when used with regular automatic reverse feeding mechanism supplied on our machines. Capacity to 8-inch cylinders.

Extension Shank for Electric Drill can be furnished for taking care of numb four Ford cylinder without removing it from the chassis. Equipped with Fine Ston unless otherwise specified. Weight complete, approximately 7 lbs.

No. 500—Storm Cylinder Hone, complete.....Each, 40
Extra Stones only, Fine, Medium, Coarse or Extra Coarse, with Grippers.Set of 2, 4
Extra Stones only, Fine, Medium, Coarse or Extra Coarse.....Set of 2, 2
No. 501—16-inch Extension (used for motors in Chassis).....Each, 1

Model M Semi-Portable Stormizing Machine



A sturdy, reliable Motor Driven Machine designed especially to meet the needs of the average Automotive Repair and Machine Shop. A permanent and convenient shop fixture built heavy to insure perfect accuracy.

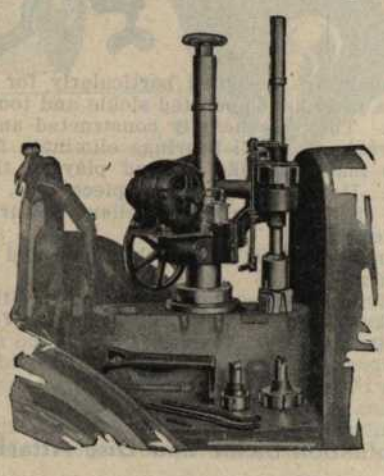
The Heavy Machined Base provides a permanent and convenient stand for the machine in the shop and adds to the convenience and efficiency for Ford and other work where the motors are removed from the chassis. In using, the block is simply slid under the cutter head and the machine lowered to the work by means of the hand wheels where it is automatically centered and clamped without handling or lifting. By removing only two bolts the machine may be lifted from the base and used independently for machining Dodge, Fordson and other blocks that are more conveniently handled without removing them from the chassis. Special yoke and single clamp bolt are provided for this purpose.

This Motor Driven Model is most popular because of its great convenience. Power is available anywhere by merely attaching to any lamp socket.

Motor Drive, ¼ H. P., 110 Volt AC Motor is Standard Equipment. DC Motor furnished at 6.00 extra. Floor space 24x29 inches. Weight complete, approximately 350 lbs.

Model M Machine, less Base, Heads and Finishing Equipment.....Each, 202.50
No. 657—Base with Yoke, Clamp Screws and Hand Wheels.....Each, 35.00
No. 635—Cutter Head, 2⅝ to 3⅛ inches.....Each, 40.00
No. 636—Cutter Head, 3⅛ to 5⅛ inches.....Each, 50.00
No. 637—Extra Long Cutters, 5⅛ to 6 inches..Each, 13.50
No. 680—Automatic Finishing Attachment with No. 500 Finishing Hone.....Each, 105.00

Model S Portable Stormizing Machin



This Lighter Portable Machine is designed for the sh where most of the work is on motors that are more co veniently and economically renewed without removi them from the chassis.

The machine is arranged so that it is clamped to t top of the cylinder block by a yoke and one clamp bo having a cross member that automatically catches und the cylinder when it is dropped through.

Driving and feeding mechanism is all contained with the main gear housing which rotates with the bar.

The Storm Patented Cutter Heads used on this machi embody the universal adjustment and self-centering feature of the heavier type, but are smaller and not interchang able with them.

The main bearings for supporting the bar are part the one-piece casting, insuring perfect alignment. Adjus ment is obtained by split tapered bushings and adjustin collars.

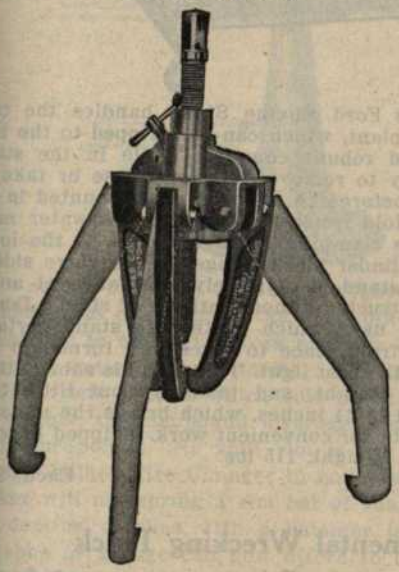
Motor Drive, 1/6 H. P. 110 Volt AC Motor is Standar Equipment. DC Motor furnished at 4.00 extra. Weig complete, approximately 125 lbs.

Model S Machine, less Heads and Finishing Equipment.....Each, 160.0
No. 445—Cutter Head Complete, 2⅝ to 3½ in.Each, 30.0
No. 446—Cutter Head Complete, 3½ to 4½ in.Each, 35.0
No. 480—Automatic Finishing Attachment with No. 500 Finishing Hone.....Each, 105.0

Service Station and Shop Equipment

GREB AUTOMATIC GRIP PULLER
BEACH PATENT

"The One Best Bet" in Wheel, Gear and Bearing Pullers of great capacity. Combinations of two or three jaws. Three jaws are the most efficient wherever they can be used. Quick, Strong, Durable, Efficient and Simple. Positive Grip, cannot unhook and adjust to work instanly.



GREB COMBINATION PULLERS

No. 1 Senior Size—for heavy work—a one man combination Puller with locking device. 4 Pullers in one. Two sets of jaws, 6 in all; 7 in. jaws open to 10 in. and 12 in. jaws to 18 in. Screw of hardened steel 1 in. diam., 14 in. long. (See Arbor Base and Gear Att.)
Ship. wt. 37 lbs. **Price $25.00**

No. 2 Junior Size—for small and light work. Will remove generator, magneto gears, couplings, etc. A combination of 4 Pullers in one. Two sets of jaws, 6 in all; 3½ in. jaws open to 4 in. and 6 in. jaws open to 7 in. Screw of hardened steel, 9/16 in. diameter, 7½ in. long. (See Bearing and Race Attach.)
Ship. wt. 4 lbs. **Price $12.00**

No. 3 Intermediate Size—designed to pull timing, pinion, transmission, differential and crank shaft gears, universal joints, etc. A combination Puller—4 in one. Two sets of jaws, 6 in all; 6 in. jaws open to 8 in., and 9½ in. jaws open to 12 in. Screw of hardened steel, 7/8 in. diam. 10 in. long (See Gear Att.)
Ship. wt. 18 lbs. **Price $18.00**

Wheel or Spoke Attach. (set of 3) **Price $2.10**

Greb Extension Arms—short length—for hooking behind wheel spokes. **Each $1.50**

Large Size for lengthening jaws where a long reach is needed. **Each $2.50**

Greb Arbor Press Base—to be used with three long jaws of No. 1 Senior Puller. Complete with two V Blocks, and one V cap. For pressing off gears, bushings, bending pipes, straightening shafts, etc. A good Bench Plate. Width 14 in., Diam. of Center Opening 3 1/8 in. Wt. 40 lbs.
Price $12.50

Greb Bearing and Race Attachment for No. 2 or No. 2B Puller has a thin edge that can be forced behind magneto, generator, and self-starter bearings and races where it is impossible to attach the jaws of any Puller. Bearings and Races up to and including 2 in. **Price $3.00**

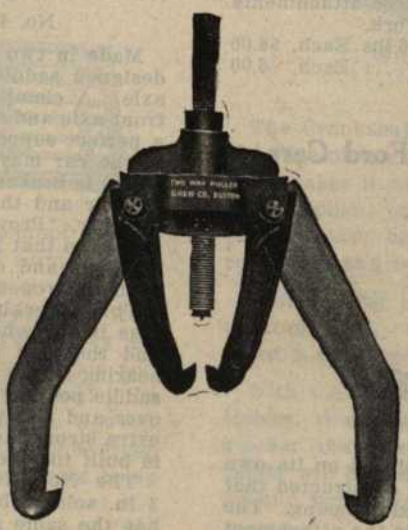
Greb Gear Attachment for all sizes of Greb Pullers. Can be forced behind gears where there is little or no room. When used back of small gears it permits an even pull.

Small size fits gears up to 4½ in. **Price $4.00**

Large size fits gears up to 6 in. **Price $5.00**

GREB MODEL G UNIVERSAL BALL RACE PULLER

Can be locked into any BALL RACE from the smallest size up to 2 in. without any changes, thereby making it the only universal Ball Race Puller on the market. Has a reach of 5 inches. 5/8 in. diam. screw. **Price $22.50**



GREB AUTOMATIC GRIP 2 WAY PULLERS

No. 1A—2 way—2 sets of jaws, 4 in all.	$15.00
No. 2B—2 way—2 sets of jaws, 4 in all.	$8.00
No. 3C—2 way—2 sets of jaws, 4 in all.	$12.00

GREB AUTOMATIC GRIP EXTRACTOR
BEACH PAT. PEND.

FOR REMOVING

Bearings, Bearing Sleeves, Cups, Races, Bushings, etc.

Positive grip. The extracting is all done by the wedge, which forces the hooks into or behind the part to be removed. The hooks can not spring and let go, as the more force applied the harder the wedge forces them outward.

No. E 6 is a Two-arm Bushing Extractor, useful on small bearings, bearing sleeves, cups, races, etc., from 3/4 in. to 1 3/4 in. inside diameter. **Price $12.50**

No. E 7—Two-arm Extractor. Designed for heavy duty work such as Timkins pressed into housings, wheel hubs, etc., from 1¼ in. to 3½ in. **Price $15.00**

No. E 8—Three-arm Extractor. Takes bearings, bearing sleeves, cups and races from 3 in. to 7 in. **Price $25.00**

Have you seen the Greb Display Stand?

Continental Universal Motor Stand

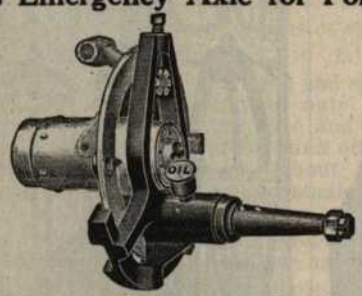
This Motor Stand comes completely equipped for handling practically all makes of motors. The Universal Attachments comprise two side rails, an adjustable front motor support and two extension brackets used mainly for the rear feet of the motor. The side rails handle all four point suspension motors and when the front feet of the motor are spaced narrower than the rear, or vice versa, the extension brackets are used for attaching the narrow feet to the rails. The extension brackets may be used to raise or lower the motor in order to obtain the correct balance. The front motor support handles all 3 point suspension motors. It is adjustable in height and width and can be used underneath or above the side rails. It is slotted its entire length and three slotted straps are furnished for connecting it to the holes in the timing gear case flange of the motor. The front motor support and the brackets which attach it to the crank case flange all being slotted give quick set-up and adjustment. The front motor support is also furnished with two special brackets which, when it is swung underneath the side rails, extend upward and attach to the machining holes in the upper crankcase of such motors as Continental, Cleveland, Willys-Knight, etc.

The Continental revolves the motor with the axis of rotation at right angles to the crank shaft, and not only are the sides of the motor free from obstructions but the ends of the motor are also accessible. It is adjustable from 0 to 34 inches and the motor can be placed in the Stand at most any desired height so as to get the center of balance vertically and horizontally correct.

For handling the Ford motor we can furnish the Model 325 Ford attachments for this stand and these attachments make a very serviceable outfit for Ford work.

No. 315—Universal Motor Stand, weight 286 lbs. Each, 56.00
No. 325—Ford Attachments, weight 23 lbs..... Each, 6.00

Ekerns Emergency Axle for Ford Cars



With this device the Ford car can be placed on its own wheels in less than two minutes. It is so constructed that it merely hooks under the flange on the axle housing. The set screw on top when screwed down holds the attachment firmly in place on the axle housing. The spindle is made of steel and tapered to fit the rear wheel hub, and revolves in a lubricated bearing 4 inches long. A compression grease cup is attached to the bearing. Remove the broken axle stub from the wheel hub and place the wheel on the spindle of the Emergency Axle and the car can be pulled in on its own wheels at any speed desired, with safety. Packed 6 in crate. Weight, 9 lbs. each.

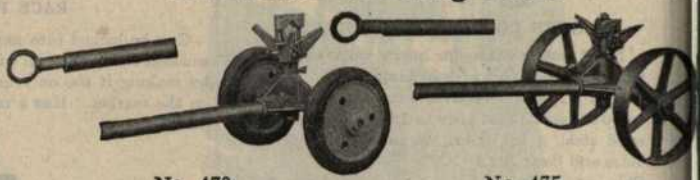
No. EA3..... Each, $6.30

Continental Ford Motor Stand

The Continental Ford Engine Stand handles the complete Ford power plant, which can be stripped to the bare cylinder block and rebuilt complete while in the stand. It is not necessary to remove the crank case or take off the transmission before the motor can be mounted in the stand. The manifold bracket fastens to the water manifold studs and the clamping bracket clamps to the lower crank case and cylinder block flange on the valve side of the motor. This stand is extremely light and yet amply strong, being constructed almost entirely of steel. Double wheel casters are used which makes the stand portable. It can be moved from place to place and turned to any position to obtain the best light. This stand is substantially constructed, light weight, and takes up but little floor space. The height is 34 inches, which brings the motor to just the right height for convenient work. Shipped knocked down, crated flat. Weight, 115 lbs.

No. 350..... Each, 25.00

Continental Wrecking Truck



No. 470. No. 475.

Made in two models. Both are equipped with a special designed saddle which fits any part of the front or rear axle. A clamp is furnished for clamping securely to the front axle and the four projecting arms of the saddle make a perfect support for the differential so that the rear end of the car may be carried on the one truck. If only one wheel is broken down the truck may be set on one side of the car and the truck will support and carry the broken member. Provision is made in the construction of the saddle so that it can be securely lashed to extremely large housings and differentials on the rear axle by means of chains or ropes.

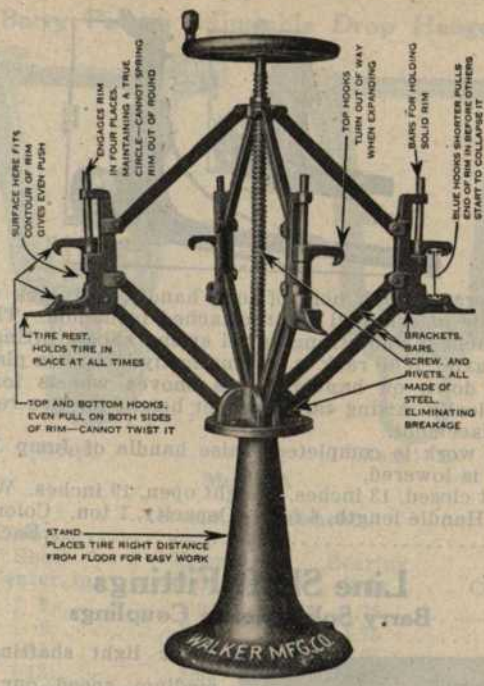
This Wrecking Truck is made with Hyatt Roller Bearings in the wheels which revolve on hardened steel races and the axle is 1⅜ in. chrome nickel steel. The long bearing in the frame of this Wrecking Truck supports the saddle post so that there is no danger of the truck keeling over and this post is adjustable in height. The tongue is extra strong, adjustable in length, and like the entire truck is built to give real service.

The No. 470, which is made with disc wheels, has 3 in. solid rubber tires 16 in. in diameter. The No. 475 has the same general specifications except that the 16 in. wheels are made of steel.

This is an especially high grade Wrecking Truck that will give service and satisfaction. Due to the ease of towing, to the saving of the car, and to its noiseless operation we recommend No. 470 Wrecking Truck. After the rubber tires are entirely worn out the wheels may be returned to the factory to be equipped with new tires.

No. 470—Rubber Tire, weight 190 lbs..... Each, 65.00
No. 475—Steel Tire, weight 145 lbs..... Each, 40.00

Walker Tire Changer



Is a sturdy machine, carefully designed and constructed to handle tire changing in the most practical manner. It is designed to make this work easy for the man who uses it, and to satisfy the customer. The improved gripping, with four sets of jaws which hold the rim at both the top and bottom, the compound leverage, means an even pull from four points. No split rim is too stiff or stubborn for the Walker Tire Changer to collapse or expand. The Walker will not spring a rim out of shape. All pounding and denting of rims with a hammer is eliminated. No tire shop or garage can now afford to operate without a Walker Tire Changer. The price is low, and the time it saves in changing a tire means real money. Weight 86 lbs.

Walker Tire Changer.....Each, 35.00

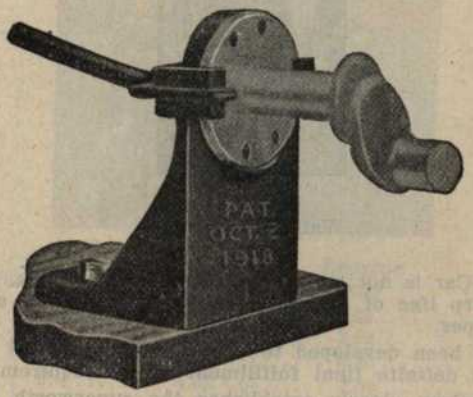
Foster Auto Repair Creeper

Constructed of metal throughout, is abuse-proof and immune to the deterioriating effects of hard service. The angle iron frame and band bottom securely riveted guarantees strength and rigidity. An upholstered head rest at one end relieves strain and fatigue. The casters are not ball-bearing, but manufactured especially for this purpose of top bearing design, pivoting readily to make the creeper freely movable under load. Finished in a wear-resisting gray enamel. 39 inches long and 18 inches wide. Large enough to comfortably support a man without being cumbersome. Weight 16 lbs.

No. 36992.....Each, 4.00

Carlson Crankshaft Holder and Band Relining Attachment

For Ford Repair Shops



Holding Crankshaft

With Band Relining Attachment

The Crankshaft Holder holds the Ford Crankshaft over the edge of work bench by a complete grip on the flange. This makes it easy to fit connecting rods, test for broken shaft, polish, caliper bearings or to remove gear and pulley. Also holds transmission shaft while filing off roughness and fitting brake drum.

Main casting is machined perfectly true to hold flange of crankshaft. Clamp is also perfectly true inside, so there is no danger of springing flange by getting too tight.

With the Band Relining Attachment on the Crankshaft Holder, rivets and reliner bands can be cut easier and quicker than any other way. The Carlson Crankshaft holder will hold all other crank shafts with a 4-inch flange for the same class of work.

No. 1200.....Each, 7.50

IN SENDING US MAIL ORDERS YOU CAN BE SURE THEY WILL BE HANDLED AS CAREFULLY AS THOUGH TAKEN BY ONE OF OUR SALESMEN.

Walker Roll-A-Car Jack

Walker Roll-A-Car

Roll-A-Car is not merely "another" garage jack. There is a sharp line of distinction between Roll-a-Car and all other types.

It has been developed to the highest degree of utility value—a definite final fulfillment of all requirements.

Comparison clearly establishes the superworth of the many vitally important improvements constituting the construction of the Roll-A-Car Jack—and emphasizes the many decided benefits to be derived from its employment.

Roll-A-Car can be placed in position under a car in a few seconds and is the only Jack with which one man can lift the heaviest car.

The control latch just below the cross-bar of handle gives three absolute controls raising, locking and reverse.

The foot pedal at the base of the handle raises or lowers the rack bar by slight pressure of the operator's foot.

After setting the rack bar by foot pressure up against the axle of a car, and placing control latch at Raise, the whole car can be raised by pumping the main handle up and down.

Each stroke of the handle gives ¾ inch raise. Six strokes, or a raise of 4½ inches, can be obtained. Often one or two inches is enough. To lower place control latch at Reverse and pump handle up and down.

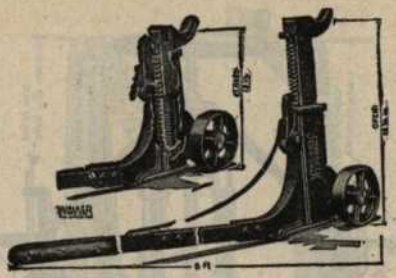
Main frames, malleable iron. Lifting pawls, high carbon drop-forged steel, heat treated. Front and rear wheels of malleable iron. Springs made from oil tempered steel. Rack bars, high carbon steel. Cap is of drop-forged heat-treated steel. Weight 117 lbs.

No. 725 Roll-A-Car—Lowest point 8 inches, highest point 18 inches. Capacity 5,000 pounds. Length 50 inches. Finish blue.....Each, 36.00

No. 726 Roll-A-Car—Same as No. 725, except rubber tires.....Each, 58.00

No. 730 Roll-A-Car—Same as No. 725, except short coupled. Lowest point 8 inches, highest point 18 inches. Especially designed for taking automobiles out of freight cars.....Each, 36.00

Walker Jump Jack



To operate, catch hold of long handle, roll Jack underneath axle of car, pull chain attached to handle. This releases rackbar and strong spiral spring shoots lifting rack against axle. The rack is automatically locked in place.

Press down on handle. This shoves wheels forward, automatically raising car to proper height for tire removal and replacement.

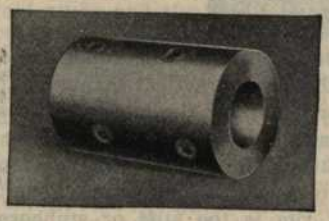
When work is completed—raise handle of Jump Jack—and car is lowered.

Height closed, 13 inches. Height open, 19 inches. Weight, 30 lbs. Handle length, 6 feet. Capacity, 1 ton. Color, blue.

No. 710.....Each, 9.00

Line Shaft Fittings

Barry Solid Sleeve Couplings



For light shafting and medium speed our Solid Sleeve Coupling is very satisfactory. It is finished all over, and complies with all legal requirements as to safety.

Shaft Size, Ins.	Diameter, Inches	Length, Inches	Each
15/16	2	3	3.00
1	2	3	3.15
1 3/16	2½	3¾	3.50
1¼	2½	3¾	3.65
1 5/16	3	4½	3.75
1 7/16	3	4½	4.00

Barry Keyless Compression Couplings

Shaft Size Ins.	Each	Shaft Size Ins.	Each
1 3/16	4.75	2 3/16	9.00
1 5/16	5.00	2 7/16	10.75
1 7/16	5.50	2 11/16	13.00
1 11/16	6.25	2 15/16	16.00
1 15/16	8.00		

Barry Safety Set Collars

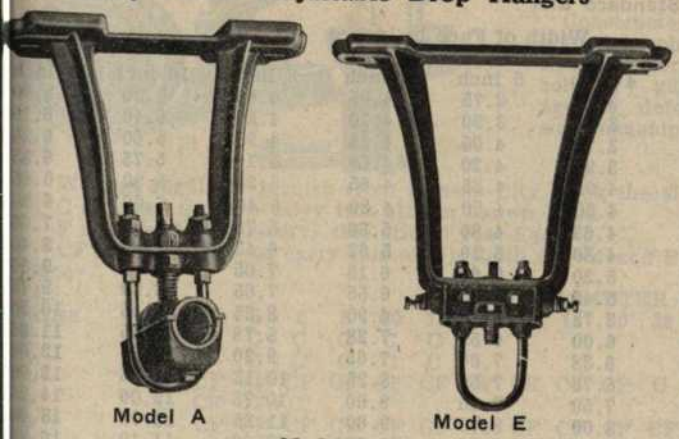
Solid.

Split.

Shaft Size Ins.	Diam. Inches	Width Inches	Each	Shaft Size Ins.	Diam. Inches	Width Inches	Each
15/16	2 7/16	1⅜	.65	1 3/16	3⅛	1⅜	1.20
1 3/16	2 7/16	1⅜	.80	1 7/16	3⅜	1⅝	1.50
1 7/16	3⅛	1⅝	1.00	1 11/16	3⅝	1⅝	1.80
1 11/16	3⅜	1⅝	1.20	1 15/16	3⅞	1⅝	2.10
1 15/16	3⅝	1⅝	1.40				

Line Shaft Fittings—Cont'd

Barry Patent Adjustable Drop Hangers



Model A

Model E

Model A

Vertical Adjustment

Shaft Size Ins.	Drop to Shaft Center, Ins.	Frame Only	Bearing Only	Complete
1 3/16	7.	3.00	1.75	4.75
	9.	3.20	1.75	4.95
	11.	3.40	1.75	5.15
	13.	3.60	1.75	5.35
	15.	3.80	1.75	5.55
1 3/16	7.	3.00	2.00	5.00
	9.	3.20	2.00	5.20
	11.	3.40	2.00	5.40
	13.	3.60	2.00	5.60
	15.	3.80	2.00	5.80
1 7/16	9.	3.60	2.25	5.85
	11.	3.85	2.25	6.10
	13.	4.10	2.25	6.35
	15.	4.35	2.25	6.60
	17.	4.60	2.25	6.85
	19.	4.85	2.25	7.10
	21.	5.10	2.25	7.35
	23.	5.35	2.25	7.60
1 11/16	9.	3.60	2.50	6.10
	11.	3.85	2.50	6.35
	13.	4.10	2.50	6.60
	15.	4.35	2.50	6.85
	17.	4.60	2.50	7.10
	19.	4.85	2.50	7.35
	21.	5.10	2.50	7.60
	23.	5.35	2.50	7.85
1 15/16	9.	3.60	3.75	7.35
	11.	3.85	3.75	7.60
	13.	4.10	3.75	7.85
	15.	4.35	3.75	8.10
	17.	4.60	3.75	8.35
	19.	4.85	3.75	8.60
	21.	5.10	3.75	8.85
	23.	5.35	3.75	9.10

Orders must specify size of shaft and length of drop.

Model E

Vertical and Lateral Adjustment

Shaft Size Ins.	Drop to Shaft Center, Ins.	Frame Only	Bearing Only	Complete
1 7/16	11.	4.35	2.25	6.60
	15.	5.05	2.25	7.30
	19.	5.75	2.25	8.00
	23.	6.45	2.25	8.70
1 11/16	11.	4.35	2.50	6.85
	15.	5.05	2.50	7.55
	19.	5.75	2.50	8.25
	23.	6.45	2.50	8.95
1 15/16	11.	4.35	3.75	8.10
	15.	5.05	3.75	8.80
	19.	5.75	3.75	9.50
	23.	6.45	3.75	10.20

Orders must specify size of shaft and length of drop.

Barry Patent Adjustable Post Hangers

Shaft Size Ins.	Reach, Ins.	Frame Only	Bearing Only	Complete
1 7/16	6.	4.00	2.25	6.25
	10.	4.50	2.25	6.75
	14.	5.00	2.25	7.25
1 11/16	6.	4.00	2.50	6.50
	10.	4.50	2.50	7.00
	14.	5.00	2.50	7.50
1 15/16	6.	4.00	3.75	7.75
	10.	4.50	3.75	8.25
	14.	5.00	3.75	8.75

Orders must specify size of shaft and length of drop.

Barry Patent Adjustable Pillow Blocks

With Bearing and Base Plate

Shaft Size Ins.	Frame Only	Bearing Only	Frame and Bearing	Base Plate Only	Frame, Bearing and Base Plate
1 7/16	2.75	2.25	5.00	4.50	9.50
1 11/16	2.75	2.50	5.25	4.50	9.75
1 15/16	2.75	3.75	6.50	4.50	11.00

Common Flat Boxes

Shaft Size Ins.	No. of Box	Length Box	Length Base	Width Base	Base Bolts Required	Each
3/4	2	2	6	1 5/8	2 3/8	.95
1 3/16	2	2	6	1 5/8	2 3/8	1.00
1	2	2	6	1 5/8	2 3/8	1.00
1 1/8	3	2 1/2	6 3/8	1 7/8	2 3/8	1.20
1 3/16	3	2 1/2	6 3/8	1 7/8	2 3/8	1.20
1 1/4	3	2 1/2	6 3/8	1 7/8	2 3/8	1.20
1 5/16	4	3	7 3/8	2 1/4	2 1/2	1.30
1 3/8	4	3	7 3/8	2 1/4	2 1/2	1.50
1 7/16	4	3	7 3/8	2 1/4	2 1/2	1.50
1 11/16	5	3 1/2	8 1/2	2 5/8	2 1/2	2.00
1 15/16	6	4	9 1/2	3	2 5/8	2.50

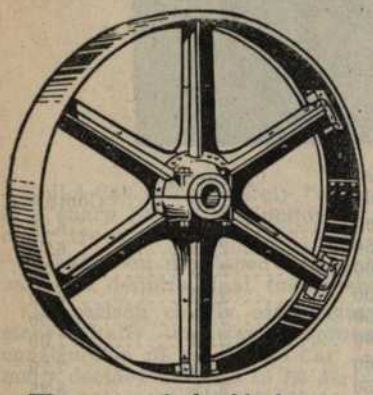
Standard Pillow Blocks

Shaft Size Ins.	Length Box	Length Base	Width Base	Base Bolts Required	Each
1 3/16	3	6	2	2 3/8	1.30
1 3/16	3 3/4	6 3/8	2 1/2	2 3/8	1.60
1 7/16	4	6 3/8	2 1/2	2 1/2	1.75
1 7/16	4 1/2	7 3/8	3	2 1/2	2.10
1 11/16	5 1/4	8 1/2	3 1/2	2 1/2	2 70
1 15/16	6	9 1/2	4	2 5/8	3.70

Steel Split Pulleys

Manufacturers' Standard List

These are strictly high grade Pulleys. They attach to the shaft by compression but on exceptionally heavy work can be keyseated at a nominal extra cost.



We can regularly ship from Kansas City stock all staple sizes; others from factory. Furnished in either Crown or Flat face. In ordering give diameter, width of face, size of arbor hole and whether Crown or Flat face.

Crown face shipped unless otherwise specified.

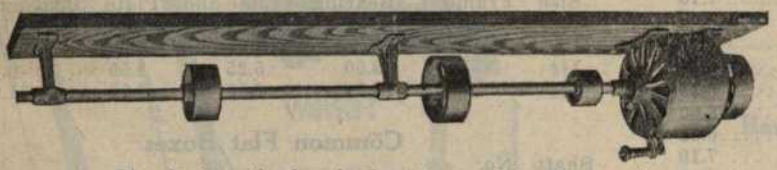
Diam. in inches	Width of Face in Inches							
	2 inch	3 inch	4 inch	5 inch	6 inch	8 inch	10 inch	12 inch
6	3.15	3.30	3.45	3.75	4.05	4.60	5.20	5.90
7	3.22	3.38	3.60	3.90	4.20	4.80	5.40	6.10
8	3.30	3.45	3.75	4.05	4.35	4.95	5.60	6.25
9	3.38	3.60	3.90	4.20	4.50	5.10	5.75	6.35
10	3.45	3.75	4.05	4.35	4.65	5.25	5.90	6.45
11	3.65	3.90	4.20	4.50	4.80	5.40	6.00	6.90
12	3.90	4.20	4.63	4.80	5.33	5.78	6.45	7.65
13	4.05	4.35	4.80	5.20	5.62	6.43	7.20	8.40
14	4.20	4.50	5.20	5.65	6.15	7.05	8.03	9.00
15	.....	4.65	5.45	5.80	6.55	7.65	8.80	9.75
16	.....	4.95	5.75	6.10	6.90	8.25	9.45	10.50
17	.....	5.25	6.00	6.50	7.28	8.78	10.05	11.25
18	.....	5.55	6.38	7.00	7.65	9.30	10.65	12.00
19	.....	5.80	6.75	7.50	8.25	10.13	11.25	12.90
20	.....	6.00	7.50	8.10	9.00	10.73	12.00	14.25
21	.....	6.25	8.00	8.90	9.60	11.25	12.98	15.60
22	.....	6.50	8.55	9.50	10.28	12.00	14.10	16.80
23	.....	7.00	8.70	9.90	10.58	12.60	14.75	18.00
24	.....	7.50	8.90	10.00	10.95	13.20	15.68	19.05
25	.....	.....	9.20	10.25	11.45	13.80	16.40	20.20
26	.....	.....	9.55	10.50	11.95	14.40	17.10	21.30
28	.....	.....	10.80	11.70	12.90	15.45	18.15	22.90
30	.....	.....	12.00	12.90	14.10	17.25	19.90	24.75
32	.....	.....	13.20	14.10	15.45	19.35	22.50	26.85
34	.....	.....	14.40	15.75	17.25	21.75	25.50	30.00
36	.....	.....	15.90	17.85	19.50	24.00	28.65	33.75
38	.....	.....	19.50	20.65	21.75	26.40	31.05	37.15
40	.....	.....	21.00	22.75	24.00	28.50	33.75	40.15
42	.....	.....	23.25	24.85	26.25	32.25	37.50	43.50

Prices include bushing to make pulley fit shaft. Be sure to give the size of shaft on your orders.

Speed Governing Line Shafts

Shipped from Factory Only.

FURNISHED COMPLETE ALL READY FOR USE



Simply turn the hand wheel to regulate the speed

This outfit is furnished complete with one speed-governing clutch, and short piece of shaft with pulleys and hangers, all mounted on a plank which can be easily bolted to ceiling, floor or wall. The speed-governing clutch is made so that it will run the shaft at practically any speed, and will also absorb the shock of the explosion of a gasoline engine. This provides smooth easy driving for cream separators, churns, washing machines, or, in fact, any machinery that can be operated with a small engine. By simply loosening the clutch with the hand wheel, the engine pulley can be disconnected altogether, or it can be engaged slightly so it will run the shaft very slowly, thus enabling the user to start the cream separator or other machine slowly, the same as by hand. Anyone can operate the shaft, for it is controlled altogether by the hand wheel on the governing clutch. This is a splendid article for a dealer to handle, as it does away with buying extra hangers, shafting, couplings, etc., and saves the time required in putting them together. All pulleys are machined, turned and faced.

No. 6 includes one speed-governor, 6 ft. of 1-in. line shaft, two hangers, one 4-in., one 6-in., and two 8-in. pulleys, all mounted on a wood base.

No. 8 includes one speed-governor, 8 ft. of 1-in. line shaft, two hangers, one 4-in., one 6-in., and two 8-in. pulleys all mounted on a wood base.

No. 10 includes one speed-governor, 10 ft. of 1-in. line shaft, two hangers, one 4-in., two 6-in. and two 8-in. pulleys, all mounted on a wood base.

No. 12 includes one speed-governor, 12 ft. of 1-in. line shaft, three hangers, one 4-in., two 6-in., and three 8-in. pulleys, all mounted on wood base.

These outfits are not recommended for machinery requiring larger than 2-horse power engines.

No. 6 weighs 110 lbs.; No. 8, 125 lbs.; No. 10, 140 lbs.; No. 12, 160 lbs.

No. 6—Complete.....Each, $40.50
No. 8—Complete.....Each, $41.80
No. 10—Complete.....Each, $43.20
No. 12—Complete.....Each, $52.00

Rules for Calculating Size and Speed of Pulleys

To Find Diameter of Driver—Multiply number of revolutions of driven by its diameter and divide product by number of revolutions of driver.

To Find Diameter of Driven—Multiply number of revolutions of driver by its diameter and divide product by number of revolutions of driven.

To Find Revolutions of Driven Shaft—Multiply diameter of pulley on drive-shaft by its number of revolutions and divide product by diameter of pulley on driven shaft.

Reverse above rule to ascertain number of revolutions of drive-shaft.

Rule for Finding Length of Belts—Add the diameter of the two pulleys together, multiply by 3⅛, divide the product by 2, add to the quotient twice the distance between the centers of the shafts, and product will be the required length.

Double belts do not transmit twice the power of single.

Vertical belts require extra tension to obtain sufficient friction on lower pulley.

Large pulleys and high speed belts are always preferable.

Moderately long belts are preferable to short ones.

Wood Split Pulleys

Constructed throughout of best materials obtainable and finished with pure orange shellac. We absolutely guarantee all pulleys against defective materials and workmanship.

We can regularly furnish from Kansas City stock the sizes listed below.
C signifies that we carry this size in Crown Face.
F signifies that we carry this size in Flat Face.
CF signifies that we carry this size in both Crown and Flat Face.

Face in Inches	DIAMETER IN INCHES																							
	3	4	5	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	48
2	C	C	C	C	C	C	C																	
3	C	C	C	C	C	C	C																	
4	C	CF	CF	CF	CF	CF	CF	CF	CF	CF	CF	C	CF	C	C	C	C	C	C	C	C	C	C	C
5	C	CF	CF	C																				
6		CF	CF	CF	CF	CF	CF	CF	CF	CF	CF	CF	CF	C	CF	CF	C	C	CF	C	C	C	C	C
8				CF	CF	CF	CF	CF	CF	CF	CF	CF	CF	C	CF	CF	C	C	CF	C	C	C	C	C
10					CF	CF	CF	CF	CF	CF	CF	CF	CF	C	CF	CF	C	C	CF	C	C	C	C	C
12					CF	CF	CF	CF	CF	CF	CF	CF	CF	C	CF	CF	C	C	CF	C	C	C	C	C

Any size not shown in above stock list we can furnish for prompt shipment from factory, also any size not shown in standard list. Stock sizes not shown in standard list, take same list as next larger size.

In ordering Wood Split Pulleys, give the following information.

1st. Diameter. 2nd. Width of Face.
3rd. Size of Arbor Hole. 4th. Whether Crown or Flat Face.

Unless otherwise specified, we send Crown Face.

Manufacturers' Standard List Adopted Dec. 1, 1908.

Diam. Inches	WIDTH OF FACE												
	3	4	5	6	8	10	12	14	16	18	20	22	24
4	2.80	2.90	3.10	3.30	3.70	4.10	4.50	.....	.....	.....	.....	.....	.....
5	2.85	2.95	3.20	3.40	3.85	4.30	4.75	.....	.....	.....	.....	.....	.....
6	2.90	3.00	3.25	3.50	4.00	4.50	5.00	.....	.....	.....	.....	.....	.....
7	2.95	3.05	3.35	3.60	4.15	4.70	5.25	5.80	.....	.....	.....	.....	.....
8	3.00	3.10	3.40	3.70	4.30	4.90	5.50	6.10	.....	.....	.....	.....	.....
9	3.10	3.25	3.60	3.90	4.55	5.20	5.85	6.50	.....	.....	.....	.....	.....
10	3.25	3.40	3.75	4.10	4.80	5.50	6.20	6.90	7.60	.....	.....	.....	.....
11	3.50	3.70	4.10	4.50	5.30	6.10	6.90	7.70	8.50	.....	.....	.....	.....
12	3.75	4.00	4.45	4.90	5.80	6.70	7.60	8.50	9.40	10.30	.....	.....	.....
13	.....	4.30	4.80	5.30	6.30	7.30	8.30	9.30	10.30	11.30	.....	.....	.....
14	.....	4.60	5.15	5.70	6.80	7.90	9.00	10.10	11.20	12.30	13.40	.....	.....
15	.....	4.90	5.50	6.10	7.30	8.50	9.70	10.90	12.10	13.30	14.50	.....	.....
16	.....	5.20	5.85	6.50	7.80	9.10	10.40	11.70	13.00	14.30	15.60	16.90	.....
17	.....	5.50	6.20	6.90	8.30	9.70	11.10	12.50	13.90	15.30	16.70	18.10	.....
18	.....	5.80	6.55	7.30	8.80	10.30	11.80	13.30	14.80	16.30	17.80	19.30	20.80
19	.....	6.10	6.90	7.70	9.30	10.90	12.50	14.10	15.70	17.30	18.90	20.50	22.10
20	.....	6.40	7.25	8.10	9.80	11.50	13.20	14.90	16.60	18.30	20.00	21.70	23.40
22	.....	7.00	7.95	8.90	10.80	12.70	14.60	16.50	18.40	20.30	22.20	24.10	26.00
24	.....	7.70	8.80	9.90	12.10	14.30	16.50	18.70	20.90	23.10	25.30	27.50	29.70
26	.....	8.40	9.65	10.90	13.40	15.90	18.40	20.90	23.40	25.90	28.40	30.90	33.40
28	.....	9.10	10.50	11.90	14.70	17.50	20.30	23.10	25.90	28.70	31.50	34.30	37.10
30	.....	9.80	11.35	12.90	16.00	19.10	22.20	25.30	28.40	31.50	34.60	37.70	40.80
32	.....	10.50	12.20	13.90	17.30	20.70	24.10	27.50	30.90	34.30	37.70	41.10	44.50
34	.....	11.30	13.15	15.00	18.70	22.40	26.10	29.80	33.50	37.20	40.90	44.60	48.30
36	.....	12.10	14.10	16.10	20.10	24.10	28.10	32.10	36.10	40.10	44.10	48.10	52.10
38	.....	17.20	17.20	17.20	21.50	25.80	30.10	34.40	38.70	43.00	47.30	51.60	55.90
40	.....	18.30	18.30	18.30	22.90	27.50	32.10	36.70	41.30	45.90	50.50	55.10	59.70
42	.....	19.60	19.60	19.60	24.60	29.60	34.60	39.60	44.60	49.60	54.60	59.60	64.60
44	.....	20.90	20.90	20.90	26.30	31.70	37.10	42.50	47.90	53.30	58.70	64.10	69.50
46	.....	22.30	22.30	22.30	28.10	33.90	39.70	45.50	51.30	57.10	62.90	68.70	74.50
48	.....	23.80	23.80	23.80	30.00	36.20	42.40	48.60	54.80	61.00	67.20	73.40	79.60

Tight and Loose Wood-Split Pulleys

Loose Pulleys may be furnished with Split Loose iron bushings. No extra charge will be made for the pulleys, but the bushings will be charged for at the prices shown.

Proper installation consists of:

Two Pulleys same diameter crown face, one to be a regular Wood Bushed Pulley to be used as a tight pulley, the other to be equipped with Iron Bushing to run loose. The only extra charge being for the Bushing as listed below.

Two Set Collars are also advisable to use on each side of Loose Pulley.

Split Loose Iron Bushings

Outside diameter, 2⅛ inches

Bore of bushing	Length of bushing 4½ ins.	6½ ins.
1⅞ ins.—Each	2.75	3.50
1⅞ ins.—Each	3.00	4.00
1⅛ ins.—Each	3.25	4.25
1⅛ ins.—Each	3.55	4.95

Century Single Phase Motors

Century Repulsion Start Induction Single Phase Motors are so constructed that the brushes touch the commutator during the starting period only (from 5 to 15 seconds, depending upon the nature of the load). This insures quiet operation and long life to both commutator and brushes.

The high starting torque makes these motors especially well adapted to the operation of pumps, air compressors, dough mixers, and other such apparatus as requires the motor to start under load. Their quiet operation makes them suitable for ventilating fans, organ blowers, etc. They are built with a particular object in view of giving many years of service under severe conditions and with little attention.

Frame	Horse Power	Speed at Approx. Full Load	Standard Pulley Dia.	Face	Complete Motor	Allowance When Not Required for Rails	Pulley
M5	⅛	1750	1¾	⅜G	22.33	.55	.30
M6	⅛	1165	1¾	⅜G	28.50	.55	,30
M5	⅙	1750	2	2	24.46	.55	.55
M7	⅙	1165	2½	2½	33.25	.70	.85
M7	¼	1750	2½	2½	29.45	.70	.85
M8	¼	1165	2½	2½	42.28	1.00	.85
M8	⅓	1750	2½	2½	35.63	.70	.85
P1BL	⅓	1165	2½	2½	49.88	1.00	.85
RS1½	½	1750	3	2½	45.13	1.00	.90
P3	½	1165	3	2½	63.18	1.30	.90
P3	¾	1750	3	2½	61.75	1.30	.90
P4	¾	1165	3	2½	78.38	1.30	.90
P4	1	1750	3	2½	71.73	1.30	.90
P6	1	1165	4	3½	92.15	1.80	1.50
RS6B	1½	1750	4	3½	89.78	1.80	1.50
RS8	1½	1165	4	3½	114.00	2.00	1.50
P6	2	1750	4	3½	102.60	2.00	1.50
P10B	2	1165	4	3½	128.25	2.00	1.50
P10B	3	1750	4	3½	125.40	2.00	1.50
RS15	3	1165	5	5½	163.40	2.25	1.80
RS15	5	1750	5	5½	163.40	2.25	1.80
RS19	5	1165	5	5½	213.75	3.00	1.80

Regularly furnished for 110-220 volt. Other voltages and larger sizes quoted on request.

Century Invincible Split Phase Motors

Invincible Split Phase Motors are designed to meet the demand for a small power motor for industrial and household drives, such as sign flashers, washing machines, ironing machines, small ventilating fans and other such apparatus that does not require a high starting torque at starting. They are conservatively rated and exceptionally well built. Phosphor bronze bearings and wick oiler for regular engine oil is provided.

Frame	Horse Power	Speed at Approx. Full Load	Standard Pulley Dia.	Face	Complete Motor	Allowance When Not Required for Rails	Pulley
S4B	⅛	1750	1¾	⅜G	12.50	.50	.30
S6B	⅛	1165	2	2	14.00	.50	.50
S5B	⅙	1750	2	2	13.75	.50	.50
S6B	⅙	1165	2	2	16.00	.50	.50
S6B	¼	1750	2½	2	14.50	.50	.65

Regularly furnished for 110 volt.

Century Polyphase Motors

2 and 3 Phase Squirrel Cage Type.

Century Squirrel Cage Induction Polyphase Motors are so ruggedly constructed that they are especially adapted to receive the severe strains and shocks encountered in gear, chain or direct connected drives. The rotor construction consists of high conductivity copper bars located in closed slots in the laminations. These bars are brazed into formed U shaped rolled copper end rings with a material that will not melt under the most severe operating conditions. The shafts are made of a special grade steel, ground to accurate dimensions over their entire length. The bearings are made of the best grade cast phosphor bronze bearing material obtainable. Oil Ring Oilers are used. End brackets are ruggedly constructed to withstand severe strains, yet so designed as to permit of free circulation of air for cooling the motor.

Frame	Horse Power	Approx. Speed at Full Load	Standard Pulley Dia.	Face	Complete Motor	Allowance When Not Required for Rails	Pulley
SC1	½	1700	3	2½	38.00	1.50	1.50
SC1	½	1135	3	2½	48.45	1.50	1.50
SC1	¾	1700	3	2½	47.50	1.50	1.50
SC1L	¾	1135	3	2½	52.25	1.50	1.50
SC1L	1	1700	3	2½	55.10	1.50	1.50
SC1½B	1	1135	4	3½	59.85	1.50	2.00
SC1½B	1½	1705	4	3½	59.85	1.50	2.00
SC3	1½	1140	4	3½	65.55	1.50	2.00
SC3	2	1705	4	3½	65.55	1.50	2.00
SC4	2	1140	4	3½	74.10	1.50	2.00
SC4	3	1710	4	3½	74.10	1.50	2.00
SC5	3	1140	5	5½	88.35	2.50	2.50
SC5	5	1710	5	5½	89.30	2.50	2.50
SC8B	5	1140	5	5½	110.20	3.50	2.50
SC8B	7½	1715	5	5½	189.20*	3.50	2.50
SC13	7½	1145	6	5¾	214.85*	4.00	3.00
SC13	10	1715	6	5¾	203.45*	4.00	3.00
SC15	10	1145	7	6¾	231.95*	4.00	4.00

*Includes Compensator. If Compensator not wanted, deduct 79.00 from list. Regularly furnished for 220 volt. Can also furnish for 440 or 550 volt on special order.

Century Automatic Start Polyphase Motors

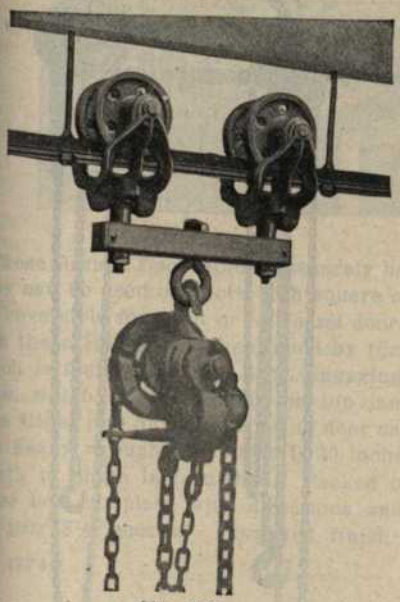
Century Automatic Start Induction Polyphase Motors are intended to be started with any single throw switch suitable for the conditions surrounding the proposed installation. This makes it impossible for an uninformed or careless operator to cause more than a predetermined starting current. The low starting current (not exceeding 245% of full load current) makes it possible to start the motor on the same fuses that will furnish ample protection while carrying its load. The static or initial starting torque will be found to average not less than 180% of full load torque for any size of these motors. These features make it a desirable motor for remote and automatic control for pumps, compressors, refrigerating machines, etc.

Frame	Horse Power	Approx. Speed at Full Load	Standard Pulley Dia.	Face	Motor With Base, Rails and Pulley	Allowance When Not Required for Rails	Pulley
AS13	7½	1725	5	5½	158.00	2.25	1.80
AS15	7½	1150	6	5¾	187.00	2.25	2.25
AS15	10	1725	6	5¾	174.00	2.25	2.25
AS19	10	1150	7	6¾	219.00	3.00	2.50
AS19	15	1725	7	6¾	219.00	3.00	2.50
AS25L	15	1150	8	7¾	271.00	5.25	3.50
AS25L	20	1730	8	7¾	262.00	5.25	3.50
AS26L	20	1155	9	8¾	311.00	5.25	4.00
AS25L	25	1730	9	8¾	294.00	5.25	4.00
AS30	25	1155	10	11	368.00	6.25	4.50

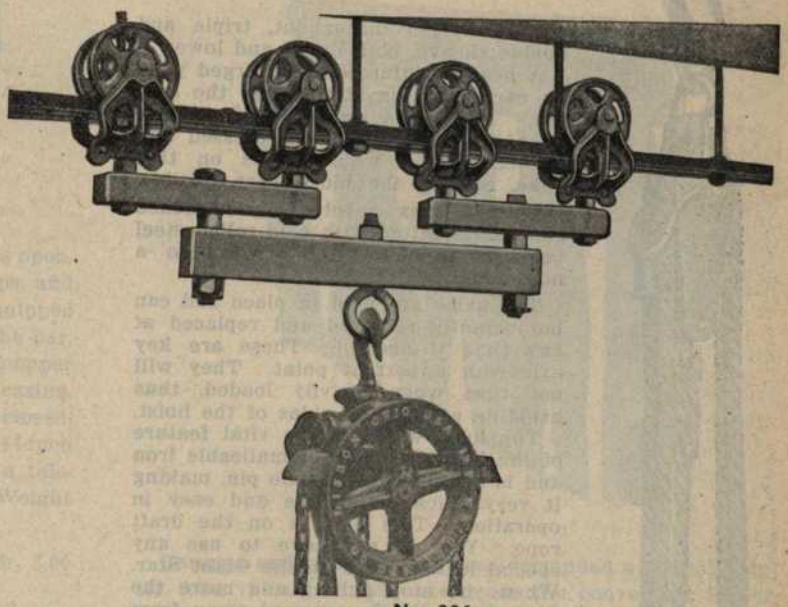
Regularly furnished for 220 volt. Can also furnish for 440 or 550 volt on special order.

Prices shown are for A. C. Motors. D. C. Motors or larger sizes quoted on request. Orders must state definitely what is wanted.

Star Trolley Conveyors



No. 963



No. 964

No. 962

All of these Conveyors operate on the Star Double Angle Track. This is made of two 1 in. high carbon steel angles, which are securely riveted together, each rivet passing through a malleable spool which keeps the angles at a uniform distance apart. This construction will test out stronger than anything used for a similar purpose. The space between the angles forms a continuous slot so that the hangers may be used at any desired distance apart. With hangers spaced 12 inches apart, this track will carry loads averaging 1,000 pounds to the foot. Star Double Angle Steel Track is finished black. Weight per foot, 2 lbs. Furnished in 6 and 12 ft. lengths. Hangers separate.

The regular Screw Hangers are $\frac{7}{16}$ in. in diameter, threaded 3½ in., and furnished in several lengths for different heights of ceilings. This makes a very easy but substantial installation.

We also furnish two patterns of Switches.

We can also furnish regular Curves where it is necessary to make a turn in a single track.

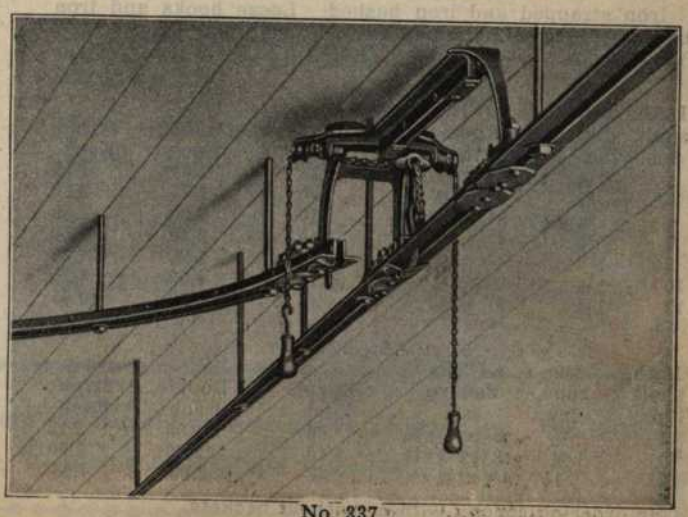
No. 962 Single Truck with swivel hook will carry loads up to 250 lbs. which have to be handled as independent units. The four-inch lathe turned wheels run on shouldered steel axles surrounded by long steel roller bearings. The shoulder on the axle prevents the wheels from binding and the long steel roller bearings assure ease of operation. The Truck Frame is heavily ribbed malleable. The hook is drop forged. Truck measures 6 in. long over all, 9½ in. high, requiring 4 in. clearance above track and 5½ in. clearance below. Weight 9 lbs.

No. 963 Double Truck has a capacity of 500 lbs. Made of two heavy single trucks. Connected, as shown with 1½ in. square steel tubing. Clearance below track 8⅝ in. Clearance above 4 in. Length over all 16 in. Weight 22 lbs.

No. 964 Four-Truck Conveyor has a capacity of ½ ton. Made of two of the No. 963 Double Truck Conveyors connected with a bar of rectangular tubing measuring 1⅝ in. by ⅝ in. Clearance above truck 4 in. Clearance below track 8¼ in. Length over all 36 in. Weight 49 lbs. All Trucks finished in gray enamel.

The Switches connect one straight line to two or three diverging lines of track. They have safety catches to guard the track ends which are left open.

No. 962—Single Truck Conveyor	Each,	4.20
No. 963—Double Truck Conveyor	Each,	9.00
No. 964—Four-Truck Conveyor	Each,	21.00
No. 337—Two-Way Switch	Each,	9.00
No. 319—Three-Way Switch	Each,	10.80
No. 444—Double Angle Track, 6 and 12 ft. lengths	Per ft.,	.27
No. 414—Lag Screw Hangers, 10¼ in., $\frac{7}{16}$ in. dia.	Doz.	2.40
No. 414—Lag Screw Hangers, 15¼ in., $\frac{7}{16}$ in. dia.	Doz.,	2.85
No. 414—Lag Screw Hangers, 17¼ in., $\frac{7}{16}$ in. dia.	Doz.,	3.15
No. 414—Lag Screw Hangers, 19¼ in., $\frac{7}{16}$ in. dia.	Doz.,	3.45
No. 414—Lag Screw Hangers, 21¼ in., $\frac{7}{16}$ in. dia.	Doz.,	3.60



No. 337

Giant Star Roller Bearing Steel Hoists

FURNISHED WITHOUT ROPE.

Steel blocks throughout, triple and double sheave, both upper and lower.

A heavy reinforced, drop-forged yoke on each block is attached to the axle pin. The hooks are attached to this yoke by a special double pressed and riveted swivel, which slides on this yoke, making the block very flexible.

The sheaves revolve on hardened steel axles, fitted with cold rolled steel bearings, reducing the friction to a minimum.

The axles are held in place and can be instantly removed and replaced at any time if desired. These are key axles—an important point. They will not turn when heavily loaded, thus avoiding cutting the sides of the hoist.

The lock, which is the vital feature of the hoist, is made of malleable iron and is attached to the axle pin, making it very quick, sure, safe and easy in operation. This lock is on the draft rope. You do not have to use any special locking rope on the Giant Star. When you stop pulling and move the draft rope slightly outward away from the block, or if pulling in that direction, the hoist instantly locks. The heavier the load, the more securely it holds and locks.

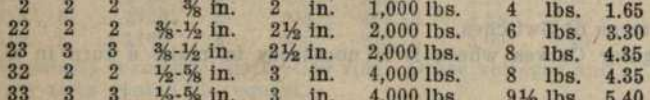
The lock is released instantly by a slight pull or a little snap of the rope toward the block.

These hoists are finished in battleship gray enamel. All hoists furnished without rope.

Price does not include rope.

No.	Sheaves Above	Sheaves Below	Size of Rope	Diam. of Sheave	Approx. Capacity	Weight Each	Each
2	2	2	⅜ in.	2 in.	1,000 lbs.	4 lbs.	1.65
22	2	2	⅜-½ in.	2½ in.	2,000 lbs.	6 lbs.	3.30
23	3	3	⅜-½ in.	2½ in.	2,000 lbs.	8 lbs.	4.35
32	2	2	½-⅝ in.	3 in.	4,000 lbs.	8 lbs.	4.35
33	3	3	½-⅝ in.	3 in.	4,000 lbs.	9½ lbs.	5.40
42	2	2	⅝-¾ in.	4 in.	6,000 lbs.	14½ lbs.	6.45
43	3	3	⅝-¾ in.	4 in.	6,000 lbs.	18 lbs.	8.10

Tackle Blocks



Iron strapped and iron bushed. Loose hooks and iron sheaves. For Manila and Sisal Rope. Not suitable for Wire Rope.

Wood

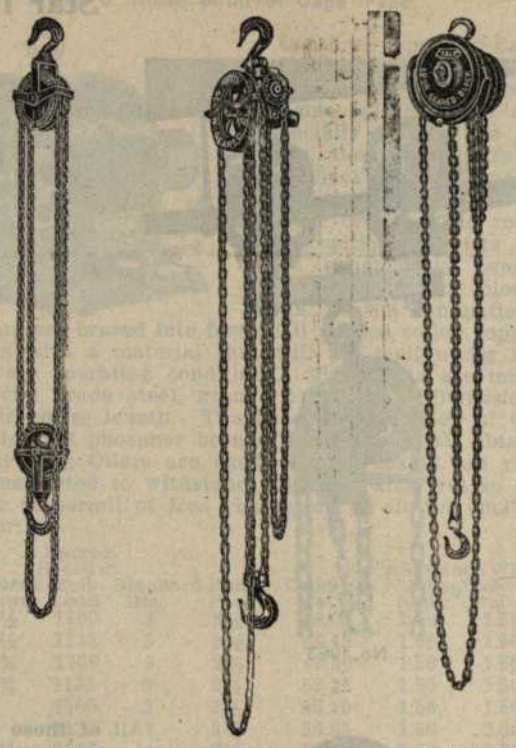
Lgth. shell, ins.	Rope dia. ins.	Size Sheave, ins.	Single, Each	Double, Each	Triple, Each
4	½	2¼ x ⅝ x ⅜	.85	1.60	2.15
5	⅝	3 x ¾ x ⅜	.90	1.75	2.25
6	¾	3½ x 1 x ½	1.10	2.00	2.90
7	⅞	4¼ x 1 x ½	1.30	2.40	3.50
8	1	4¾ x 1⅛ x ⅝	1.65	2.85	4.25
10	1⅛	6¼ x 1¼ x ⅝	2.75	4.50	6.25
12	1¼	8 x 1⅜ x ¾	4.45	7.50	10.65

Steel

Lgth. shell, ins.	Dia. rope, ins.	Size sheave, ins.	Single, Each	Double, Each	Triple, Each
4	½	2¼ x ⅝ x ⅜	.85	1.60	2.15
6	¾	3½ x 1 x ½	1.10	2.00	2.90
8	1	4¾ x 1⅛ x ⅝	1.65	2.85	4.25

In ordering specify with or without beckets.

Chain Hoists



Differential. **Duplex.** **Triplex.**

Made in three different types. The Triplex Spur Gear the most efficient and will lift load double the speed of Duplex Worm Gear type. The Duplex Screw Gear is popular type of double chain Worm Wheel or screw blo has bronze Worm Wheel. The Differential have la sheaves and full size chain of special material.

Differential Chain Blocks.

Rated Capacity in Tons	Regular Lift, Feet	Min. Dist. Between Hooks, Ins.	Test Load in Tons of 2,240 Lbs.	Complete Each	Extra Lift Chain
¼	6	17	⅜	36.00	4.8
½	7	21	¾	42.00	4.8
1	8	26	1½	56.00	5.0
1½	8½	32	2¼	72.00	5.4

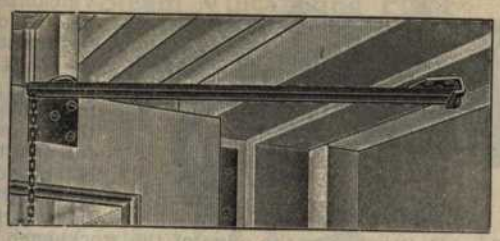
Duplex Screw-Geared Chain Blocks.

Rated Capacity in Tons	Regular Lift, Feet	Min. Dist. Between Hooks, Ins.	Test Load Tons, 2,240 Lbs. to Ton	Standard Chain Lineal Feet. Load	Hand	Complete	Extra Lift Chain.
½	8	13	¾	18	16	50.00	2.5
1	8	16	1½	18	16	60.00	2.6
1½	8	19	2¼	18	16	80.00	2.7
2	9	21	3	20	18	100.00	2.8

Triplex Spur-Geared Chain Blocks.

Rated Capacity in Tons	Regular Lift, Feet	Min. Dist. Between Hooks, Ins.	Test Load in Long Tons	Complete Block	Extra Lift Chain in Feet Load	Hand	Per Foo
¼	8	13	⅜	70.00	1	2	1.80
½	8	13	¾	70.00	1	2	1.80
1	8	16	1½	90.00	1	2	1.90
1½	8	18	2¼	120.00	1	2	2.00
2	9	21	3	140.00	1	2	2.10
3	10	32	4½	180.00	1	2	3.00

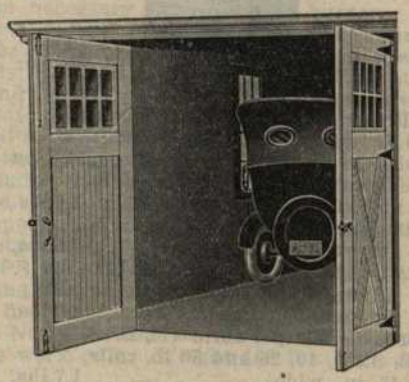
Stanley Garage Door Holders



These Garage Door Holders securely hold the doors open. They can be used on doors with square or curved tops, and are reversible for right or left hand doors. Doors equipped with these Holders are held open by the action of the bar, which is fastened to the door, engaging with the bumper plate, which is attached to the top jamb or door casing. By a slight pull on the chain, the door can be easily closed. The heavy wrought steel arm is 30 inches long. A 44-inch length of chain is furnished. Packed one pair in a telescope box complete with directions and screws. Weight per pair 8½ pounds. Japanned finish.

No. 1774.....Per pair, 5.00

Stanley Garage Door Sets

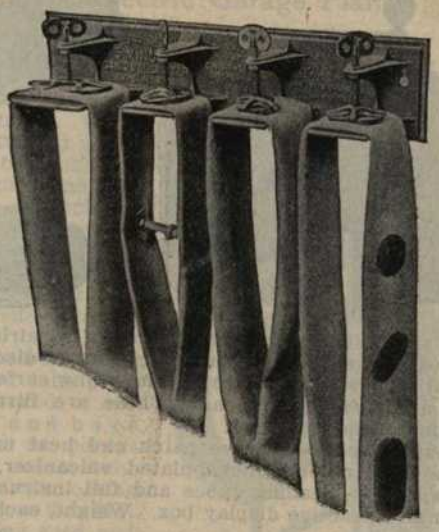


These sets are used on light or medium weight garage doors. There are extra heavy, reversed pad, T-hinges of 4-inch size, without ball bearing washers. The doors are fastened on the inside with 6-inch Foot and Chain Bolts, and securely locked on the outside by using the padlocking attachment included with the No. 1260—Size 4 Thumb Latch. Each item is wrapped separately, with screws of proper size, finish and quantity included. Packed in a telescope box. Weight 20 lbs. Japanned finish.

Stanley Garage Door Holders No. 1774 are not included in these sets, but can be furnished at an additional cost when specified.

No. 1776.....Per set, 9.40

5-Minute Garage Vulcanizers



Garages and repair shops have demanded a large capacity tube vulcanizer that would use the convenient Shaler Patch-&-Heat Units that have met with such phenomenal success during the past few years.

This Shaler Vulcanizer uses the standard sizes of Shaler Patches and in addition mends much larger cuts with the new four-inch Ex-Long Patches. Makes four repairs at one time in five minutes. No reliable method of vulcanizing has ever approached this for speed and simplicity. Anybody in the shop can now vulcanize as well as an expert. Quick service, bigger profits. It will create enough new business, even in the shop where there is already a vulcanizing plant, to pay for itself quickly. It hangs on the wall, taking a space 5x20 inches.

The Shaler Patch-&-Heat Unit is always ready for instant use day or night. No waiting, it never fails. It is a complete unit—a compact combination of chemical fuel, vulcanizing pan, and raw rubber patch. Simply clamp it over the puncture, light the non-flaming fuel, and in five minutes you have a permanent, feather-edged repair as strong as the tube itself.

This vulcanizer practically costs the repairman nothing, because with it are included 28 free patches, 12 round, 12 oblong, and 4 extra long, enough to pay for the whole outfit if they bring only 25c each. It should easily pay for itself in the first few days Weight 17 lbs.

Additional patches are supplied in garage quantities at a very moderate price, making this vulcanizer very economical to use.

No. M4—Shaler 5-Minute Garage Vulcanizer 10.00

No. G6—1¾-inch round Patch-&-Heat Units, package of 50. . . . . 3.00

No. G7—1⅜x2¼-inch oblong Patch-&-Heat Units, package of 50. . . . . 3.00

No. G8—1¾x4-inch oblong Patch-&-Heat Units, package of 25. . . . . 2.50

The Garage Door Fittings shown on this page are merely representative of our line. We also carry the full line of Star Garage Door Fittings. For detail listing refer to Index.

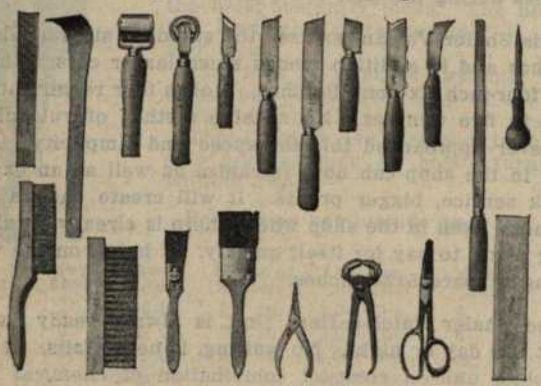
Shaler 5-Minute Vulcanizers

A very simple but successful method of repairing. Heat is produced by a chemically treated cardboard disc encased in a metal pan, which acts as a vulcanizing surface. The patch is attached to this pan. These are furnished in either round or oblong shape.

Each outfit includes twelve patch and heat units, half round and half oblong, nickel-plated vulcanizer, a piece of sandpaper for cleaning tubes and full instructions, all packed in an attractive display box. Weight, each, 1 lb.

No. M-5—Vulcanizer complete. . . . . Each, 1.50
No. 5R—Round Patch and Heat Units. . . . . Per doz., .75
No. 5L—Oblong Patch and Heat Units. . . . . Per doz., .75

Shaler Special Vulcanizing Tools



No.	Name and Description.		
1	Rubber Roughener, 8-inch tempered steel	Each,	.45
2	Casing Scraper, 12-inch hand forged	Each,	.45
3	Roller, 1½x1½-inch, steel, ball bearing	Each,	1.25
4	Stitcher, 1½-inch, toothed edge, ball bearing	Each,	1.25
5	Bevel End Cutting Knife, 2-inch	Each,	.40
6	Square Rubber Knife, 4x1-inch	Each,	.40
7	Square Rubber Knife, 6x1-inch	Each,	.45
8	Notched Fabric Knife, 2-inch	Each,	.50
9	Notched Fabric Knife, 4-inch	Each,	.60
10	Hawk Bill Notched Knife, 2¼-inch	Each,	.60
11	Lining Probe for loose fabric, 10-inch blade	Each,	.60
12	Rubber Probe, 7-inch round steel point	Each,	.20
13	Wire Brush, extra heavy shoe handle	Each,	.45
14	Wire Brush, extra heavy flat back	Each,	.60
15	Cement Brush, 1-inch, bristles in rubber	Each,	.25
16	Cement Brush, 2-inch, bristles in rubber	Each,	.45
17	Plug Pliers, 4½-inch, Bernard's patent	Each,	.35
18	Fabric Pincers, 5-inch	Each,	.60
19	Shear Snips, 8-inch crucible steel	Each,	.75
20	Sharpening Stone, 8x1½-inch square	Each,	.30

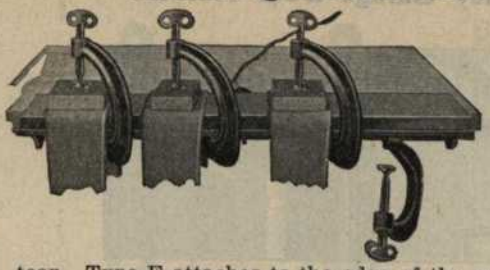
Assortment consisting of one each of the above, complete in box. . . . . Each, 10.00

Tire Spreader

Gives nine adjustments, by ½-inch steps up to 9 inches, so that any size tire can be held in the most convenient position. Nickel plated.

No. W708S. . . . . Per doz., 1.80

Vulcanizing Electric Tube Plate



The ideal Vulcanizer for tire shop or service station. Its 5x24-inch surface takes four tubes at a time, or the full length can be used for mending a two-foot rip or tear. Type E attaches to the edge of the workbench. The four clamps are hinged to drop down out of the way when not in use and can be moved lengthwise to any point. Temperature regulated automatically by thermostats built inside of Vulcanizer and adjusted at the factory to maintain the correct temperature. The outfit consists of Vulcanizer with polished nickel surface, four clamps, four blocks for different sized repairs, two tested thermometers, cable and plugs for attaching to light socket. Maximum current, during thirty minutes required for heating up, 500 watts. Average after initially heated, 200 watts. Weight 40 lbs. State voltage of current.

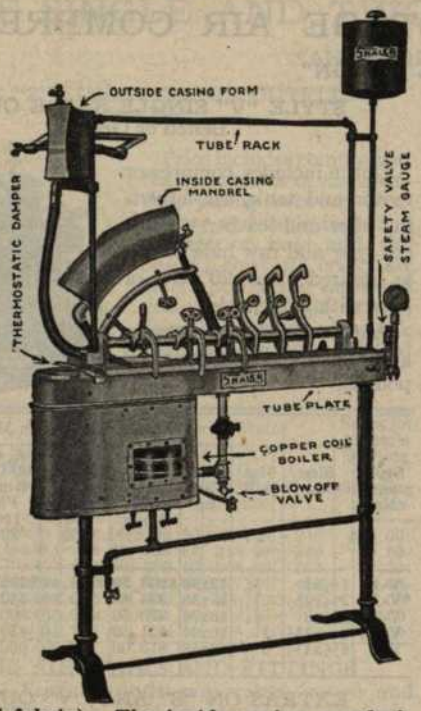
Type E, No. 91—(Alternating current only). . . . Each, 30.00

Vulcanizing Repair Material

	Wt. per sq. yd.	Per lb.
For Fabric Tires.		
No. 817-G—Tread Stock, in Sheet Form, 5 and 10 lb. flat cartons, 18 in. square; 25 lb. rolls, 18 in. wide, 1/8 in. gauge	4.6 lbs	$1.40
No. C-116—Cement Gum. 5, 10 and 25 lb. rolls, 18 in. wide, 3/32 in. gauge	1.6 lbs.	$2.40
No. C-126—Cushion Gum. 5, 10 and 25 lb. rolls, 18 in. wide, 3/32 in. gauge	2.6 lbs.	$1.80
No. 2130—Body Fabric (F. B. S. and C. O. S.). 5, 10, 25 and 50 lb. rolls, approx. 47 in. wide	2.0 lbs.	$3.00
No. 3140—Breaker Strip Fabric (F. B. S. and C. B. S.) 5, 10, 25 and 50 lb. rolls, approx. 45 in. wide	1.7 lbs.	$3.20
For Cord Tires.		
No. 8100—Cord Tire Tread Stock in Sheet Form, 5, 10, 25 and 50 lb. rolls, approx. 18 in. wide, 1/8 in. gauge	4.5 lbs.	$1.70
No. 8200—Side Wall Gum. 5, 10, 25 and 50 lb. rolls, 18 in. wide, 1/8 in. gauge	4.6 lbs.	$1.80
No. 8300—Cushion Gum. 5, 10, 25 and 50 lb. rolls, 18 in. wide, 3/32 in. gauge	1.6 lbs.	$2.25
No. 7430—Fabric. 5, 10, 25 and 50 lb. rolls, 28 in. wide	2.7 lbs.	$3.30
Miscellaneous.		
No. CS-310—Combination Repair Sheet—Black. 5, 10, 25 and 50 lb. rolls, approx. 36 in. wide, 3/32 in. gauge	2.7 lbs.	$2.25
No. C-446—Quick Cure Tube Gum (5 min. cure). 5 and 10 lb. cartons, sheets 18 in. square, 3/32 in. gauge	1.75 lbs.	$2.25
Unvulcanized Camel Back Gum. No. 8100 Note:—Camel Back Stock is furnished only in 8100 grade. (In ordering specify size of tire.)		$1.50
Built-Up Tread Stock. Camel Back, Cushion Stock and Breaker Strip, built into one stock. (In ordering specify size of tire.)		$1.70

Shaler Vulcanizers for Repair Shops

Steam Vulcanizing Plant



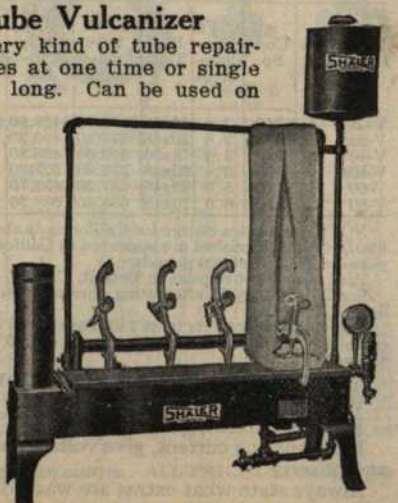
Covers all requirements of a garage or repair shop. Handles all practicable tube and casing repairs. Machined tube plate 4¾x30 ins., cures six tubes as quickly as one and heats independently of casing attachment. Swivelled clamps insure even pressure to all parts of repair. All sizes of casings repaired by approved wrapped tread method as used by tire manufacturers. Simply build up a re-enforcement of fabric inside the casing, and fill hole through tire with Para gum (do not cut away a lot of expensive rubber and fabric). The inside casing mandrel, 14 inches long, then applies the heat directly against the fabric; the outside casing form which has one side shaped for tread repairs, the other to fit close to the rim, heats from the outside. A wrapping of tape and the Shaler clamping device apply enormous pressure. No air bags. The repair becomes the strongest part of the tire. No attention necessary after lighting burner. The boiler, a copper coil, raises steam in about twenty minutes and holds it at the right pressure indefinitely, a thermostat automatically regulating the gas or gasoline burner. Steam gauge and thermometer indicate both pressure and temperature. Safety valve eliminates danger of explosion.

Type NPR No. 41—Complete Garage Outfit as shown, weight 200 lbs.....$ 75.00
Includes 6 clamps and blocks for tube work, bead strips for rim cuts, casing clamps, tape for wrapping treads, thermometer, steam gauge and safety valve.

Type NPR No. 42—Same as above, but having two casing forms, giving double capacity; weight 260 lbs. $100.00

Type N No. 41—Same as above, but equipped for tube work only. Weight 160 lbs.....$ 50.00

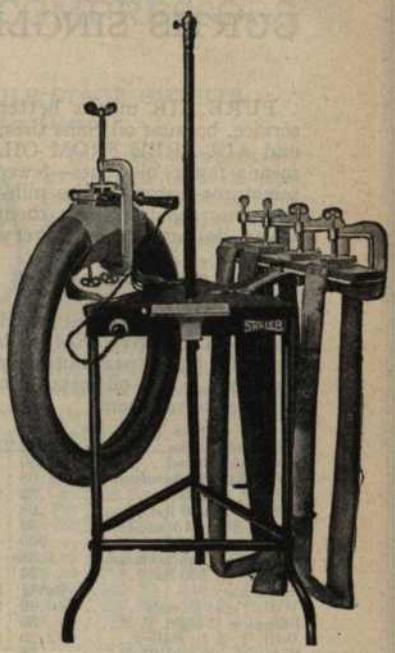
Steam Tube Vulcanizer



This model does every kind of tube repairing. It cures four tubes at one time or single repairs up to two feet long. Can be used on floor or workbench, as the 4¾x24 ins. machined tube plate stands 9 ins. high. Runs for less than two cents an hour. Steam is raised in fifteen minutes and maintained at proper pressure, without regulating, by the Shaler automatic thermostat control. Equipped with steam gauge, safety valve and four clamps and blocks, same as larger models.

Type L, No. 40—Weight 75 lbs.....$35.00
Gas or gasoline burner on any of above vulcanizers at no extra cost. If not specified, gasoline burner furnished.

Electric Garage Plant



This plant, Type ACE, consists of the complete units Type A, Type C and Type E, mounted on a strong tubular stand. It does the same perfect work and has the same capacity as Type NPR steam plant—twenty tubes and one casing per hour. Temperature controlled automatically.

The inside casing form and tube plate are attached to the stand and have switches to permit heating separately. The outside casing form has a five foot conducting cord and plug which fits a socket in the stand or any lamp socket if work is to be done elsewhere on inflated tires. All connections are complete in the stand and connection to city current is made overhead, out of the way, through a plug at the top of the upright standard by means of extension cord to any lamp socket. No special wiring needed, as the entire apparatus consumes less current than an electric flatiron. Shipping weight 115 pounds.

Type ACE, No. 101—For Alternating Current.....$75.00
For rheostat controlled direct current equipment add $10.00 to list price. (Specify voltage when ordering.)

Units Which Make Up Above Plant

(Can be purchased and used separately.)

Combination Casing Form and Tube Plate

Corresponds with inside form of Type ACE; that is, one face mends rim cuts, while the other fits large tread repairs. A flat surface mends one or two tubes at a time on an asbestos inlaid shelf attached to workbench. Temperature controlled automatically by a thermostat. No watching or regulating. Fits any size tire and mends cuts, etc., while tire is inflated on rim. Supplied with tube shelf, thermometer, conducting cord and full instructions. Weight 15 pounds.

Type A, No. 61—Polished nickel for A. C. and D. C..$16.00

Inside Casing Form

Corresponds with inside form on ACE. Used with Type A for making casing repairs by the wrapped tread method. Fits any size tire. Supplied with tread tape, bench brackets, conducting cord and thermometer. Weight 18 pounds.

Type C, No. 71—Thermostat Control, A. C. only.....$25.00
For rheostat controlled D. C. equipment, add $5 list.

Casing Mandrel

A casing form for holding tires in convenient position while prepairing repairs and mending superficial cuts. Brackets included.

Casing Mandrel.....Each, 2.50

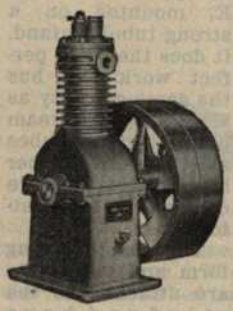
CURTIS SINGLE AND TWO-STAGE AIR COMPRESSORS

"AN ORIGINAL DESIGN"

PURE AIR means better service, because oil ruins tires, and AIR FREE FROM OIL means fewer blowouts—fewer punctures—greater tire mileage—less repairs; saves them many dollars upkeep every month.

Better Service Means More Customers

1. CONTROLLED SPLASH SELF-OILING SYSTEM, with cylinder oiling permanently regulated. No oil gets into the tires to rot them.



Size	1	*2	3	*4	5
Bore and Stroke	1⅝x2	2⅛x2½	2½x3	3x3½	4½x4½
Minimum Speed	450	350	300	250	200
Cu. Ft. Displacement	1.08	1.8	2.55	3.58	8.28
H. P. at 100 lbs.	.22	.41	.52	.81	1.93
H. P. at 200 lbs.	.28	.55	.70	1.03	2.52
Usual Size Motor, H. P.	¼	½	¾	1	3
Maximum Speed	700	600	550	500	400
Cu. Ft. Displacement	1.68	2.70	4.7	7.20	16.5
H. P. at 100 lbs.	.34	.54	.95	1.45	3.34
Size Pulley	9x1¾	11x2½	12x2½	14x2¾	18x4½
With Tight P. only	$46.40	$60.50	$76.30	$80.60	$172.80
Shipping Weight T. P.	50	65	90	130	250
With T. & L. Pulley	$52.20	$66.20	$82.10	$86.40	$201.60
Shipping Weight T. & L.	55	75	100	145	300
Auto Starter	$64.00	$64.00	$72.00	$80.00	$120.00

***The No. 4 is the most popular size for garage service, and the No. 2, the next most popular. See data below.**

STYLE "S" SINGLE STAGE OUTFITS

These outfits are complete, including air compressors with hand unloader, and tight pulley only (see extra if loose pulley is wanted); also steel pressure tank, air gauge, drain cock, outlet cock from tank with 20 feet of hose with tire chuck, and piping complete between the compressor and tank, as illustrated.

Style and No.	Size of Compressor	Size of Pipe	Size of Tank	Cap. in Gals.	Price Complete Outfit as Above	App. Shipping Wt.	Extras — Loose Pulley	Extra for Autom'c Starting and Stopping Device
S-1	1⅝x2	½	12x36	17.2	$ 99.40	125	$4.30	$48.00
S-2	2⅛x2½	½	16x36	32.2	117.60	140	4.30	48.00
S-3	2½x3	¾	16x36	32.2	131.00	190	4.30	54.00
*S-4	3 x3½	¾	18x48	52.5	150.00	295	4.30	60.00
S-5	4½x4½	1¼	20x60	82.5	283.20	480	21.60	90.00

CURTIS AIR AND WATER STANDS

No oil checks, no counterweights, no clock spring to crystallize and break, no swinging hose to blow or whip around and be dangerous to persons standing near by, or to glass, windshield or finish of the car. Price of either column or low type as illustrated, with 20 feet of air hose and chuck, without water connections, F. O. B. St. Louis, list.....$90.00

Either type, complete as above, also including faucet, 10 feet of water hose and spring nozzle, list.....$113.00

Intermittent automatic flasher attachment for light, 110-125 volt, extra, list.....$7.50

Or for 6-8, 32 or 220 volt, extra $9.70

STYLE "V" SINGLE STAGE OUTFIT
Belted or Geared

Outfit includes compressor motor and tank, self-adjusting idler and leather belt, or cut gear and raw hide pinion as desired; also 20 feet of hose with tire chuck.

Automatic device cuts in at 120 pounds and out at 150 pounds.

Style and No.	Size Com.	Mot. H.P.	Size Tank In.	Complete, with Motor: D. C. 110–220 Volts	A. C. 60 Cy. Sg. Ph. 110–220	A. C. 60 Cy. 2 or 3 Ph. 110–220	Ap. Sh. Wt.	Ex. for Automatic Start. and Stop'g Device
V-1a	1⅝x2	¼	12x36	$263.70	$293.40	$293.40	285	$60.00
*V-2a	2⅛x2½	½	16x36	325.80	352.80	352.80	375	60.00
V-3a	2½x3	¾	16x36	370.50	412.50	390.00	425	67.50
V-4	3 x3½	1	16x36	421.50	467.40	423.80	460	75.00
V-5	4½x4½	3	18x48	813.00	783.90	660.30	850	112.50

EXTRAS ON "S" AND "V" OUTFITS

For 25 or 40 cycle alternating current motors, increase lists 15%.

‡The tanks listed are not suitable for use in California, Detroit, Chicago or Canada.

For 150 pounds pressure California Specification Tanks, advance lists 5% on "V" Single Stage Outfits, and 15% on "S" Single Stage Outfits.

Chicago or Detroit Tanks quoted on application.

STYLE "V" TWO STAGE OUTFITS
(Belted Only)

SPECIFICATIONS

Outfit consists of No. 20T Curtis Two-Stage Compressor, 16 x 36 inches or 20 x 48 inches, steel air tank, 200 pounds working pressure, Motor A. C. or D. C., as ordered, motor pulley, self-adjusting idler and single leather drive belt, pop safety valve, pressure gauge, drain cock, all necessary piping from compressor to tank, 20 feet of special air hose and tire chuck.

PRICES AND DATA

Style and No.	Mot. H.P.	Com. Sp.	C. Ft. Displacement	Size Tank	D. C. 110–220 Volts	A. C. S. Ph. 60 Cy. 110–220 Volts	A. C. 2or3Ph 60 Cy. 110–220 Volts	Wt	Extra Auto. Start'g and Stop'g Device
V-20	¾	210	2.6	16x36	$441.80	$456.00	$427.50	540	$57.00
V-20a	¾	210	2.6	20x48	477.40	490.20	461.70	600	57.00
V-40	1	280	3.4	16x36	456.00	468.80	441.80	565	71.30
V-40a	1	280	3.4	20x48	513.00	527.30	484.50	625	71.30
V-60	1½	410	5.0	20x48	567.20	652.70	545.80	675	106.90
V-80	2	550	6.6	20x48	638.40	688.30	588.50	700	106.90

NOTE—No extra charge for California tanks on two-stage outfits, but tanks furnished are approved in California for 150 pounds pressure, instead of 200 pounds.

Tanks listed not suitable in Detroit, Chicago or Canada.

For 25 or 40 cycle alternating current motors, increase above lists 15%.

Automatic device cuts in at 140 pounds and out at 175 pounds, except in California where same cuts in at 120 pounds and out at 150 pounds

INFORMATION WANTED ON "V" OUTFITS

Whether belted or geared.

If direct current, give voltage.

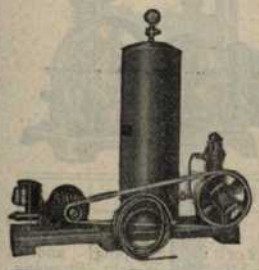
If alternating current, give voltage, number of cycles and phase.

Always state what extras are wanted.

CURTIS SINGLE AND TWO-STAGE AIR COMPRESSORS

"AN ORIGINAL DESIGN"

STYLE "Z" SINGLE STAGE OUTFITS
(Belted Only)



Price includes compressor, tank and motor of size specified, piping between compressor and tank, including 20 feet of hose and tire chuck, shut-off cock, air gauge, pop safety valve and drain cock, single leather drive belt, mounted on oak base, as illustrated. Belted only.

Style and No.	Motor H. P.	Size Tank In.	Complete with Motor: D. C. 110–220 Volts	A. C. 60 Cy. Sg. Ph. 110–220	A. C. 60 Cy. 2or3Ph. 110–220	App. Ship. Wt.	Extra for Autom'c Starting and Stopping Device
Z-1a	¼	12x36	$216.00	$259.20	$259.20	245	$60.00
*Z-2a	½	16x36	291.60	318.60	318.60	300	60.00
Z-3a	¾	16x36	324.00	382.50	358.80	365	67.50
*Z-4a	1	16x36	378.00	423.90	377.30	410	75.00
Z-4b	1	18x48	396.90	442.80	396.40	500	75.00
Z-5	3	18x48	758.10	761.40	602.40	780	112.50
Z-5a	3	20x60	801.90	788.40	626.70	840	112.50

CURTIS AIR TANKS AND FITTINGS

Prices include pop valve, gauge and drain cock. Not suitable in Cal., Detroit, Chicago or Canada. Write for price.

Size of Tank	Cap. in Gal.	Cap. in Cu. ft.	Usual Size of Compressor	Tank and Fittings,* No Piping for 150 Lbs. Working Air Pressure: Wt.	Price
12x36	17.2	2.3	2½x2½"	60	$32.80
16x36	32.2	4.3	2½x3"	77	37.80
18x48	52.5	7.0	or two-stage 3x3½"	117	55.40
20x60	82.5	11.0	or two-stage 4½x4½" or truck-tire	176	80.60

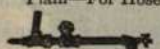
Service Car Tank 16x36, no hose.....$51.50

Needle Valves Plain—For Hose

Drain Cock

Air Gauge

Pop Safety Valve



Piping

Air Nozzle

Reducing Valve

Dash-pot Check Valve

Size Comp.	Usual Size Tank	Size of Piping	Piping Between Comp. and Tank	Plain Needle Valve*	Dash Pot Check Valve	Pop Safety Valve
1½x2	12x36	½	$5.00	$3.80	$5.30§	$4.60§
2½x2½	16x36	½	5.00	3.80	5.30§	4.60§
Two-stage	16x36	½	5.00	3.80	5.30§	4.60§
2½x3	16x36	¾	7.60	4.40	6.30†	4.60§
3 x3½	18x48	¾	7.60	4.40	6.30†	4.60§
4½x4½	20x60	1¼	10.10	7.60	11.90†	4.60‡
Truck-tire	20x60	1¼	10.10	7.60	11.90†	4.60‡

Air Gauge only.....$ 2.50
Drain Cock only..... .80
20 ft. of Hose and Tire Chuck..... 12.60
Blow Pipe Air Nozzle..... 3.20
*¼ in. Plain Needle Valve (Outlet Cock)..... 2.10
For Hose Attachment on Outlet Cock..... .70
¼ in. Pressure Reducing Valve..... 19.60
§=¼ in. Pipe Connections. †=⅜ ‡=½

***Popular size garage outfits. ALL PRICES SUBJECT TO DISCOUNT.**

STYLE "X" SINGLE STAGE OUTFITS
(Belted or Geared)

Includes compressor, motor and tank of sizes listed, self-adjusting idler and single leather drive belt or cut fly wheel gear and rawhide pinion as desired. Piping between compressor and tank, 20 feet of hose with tire chuck, 20 feet of cord with plug and switch. Outfit mounted on wheels.

Style and No.	Motor H. P.	Size Tank In.	Complete with Motor: D. C. 110–220 Volts	A. C. 60 Cy. Sg. Ph. 110–220	A. C. 60 Cy. 2 or 3 Ph. 110–220	App. Ship. Wt.	Extra for Autom'c Starting and Stopping Device
X-1a	¼	12x36	$286.20	$315.90	$315.90	320	$60.00
*X-2a	½	16x36	348.30	375.30	375.30	390	60.00
X-3a	¾	16x36	382.50	456.30	440.70	440	67.50
X-4	1	16x36	459.00	504.90	450.80	500	75.00
X-5	3	18x48	861.00	828.90	716.30	900	112.50

EXTRAS ON ALL OUTFITS

For 25 or 40 cycle alternating current motors, increase above lists 15% on Z and X outfits.

‡The tanks listed are not suitable for use in California, Detroit, Chicago or Canada.

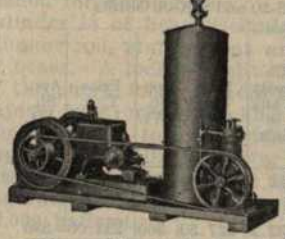
For 150 pounds pressure California Specification Tanks, advance these lists 5%.

Chicago or Detroit Tanks quoted on application.

Oil-proof rubber tires on wheels, "X" outfits, extra $13.50.

INFORMATION WANTED. (See preceding page.)

GASOLINE ENGINE DRIVEN OUTFITS



Engine with 1½ brake horse power, hopper cooled, fuel supply tank in base, auxiliary gasoline tank for starting purposes where kerosene or distillate is used, throttling governor, high tension magneto (i. e., jump spark, not make and break ignition), with switch by which ignition can be quickly cut off, stopping the engine without closing the throttling valve, all necessary oil cups and starting crank included.

Our outfit can be easily started by hand since the compressor is supplied with a hand unloader.

PRICES AND DATA, SINGLE OR TWO-STAGE

Z-3-AG Single-Stage Outfit, 2½x3 inch compressor, 500 R.P.M., 4.26 cubic feet displacement; 1½ H. P. hopper-cooled engine, high tension magneto; 16x36 inches, 150 pounds, 32-gallon tank.....$352.50

Z-4-BG, same outfit, with 3x3½ inch compressor, 320 R.P.M., 4.58 cubic feet displacement, 18x48 inches, 53-gallon tank.....$412.50

Z-40-AG, same outfit, with Curtis TWO-STAGE Compressor, 363 R.P.M., 4.43 cubic feet displacement; 16x36 inches, 32-gallon tank.....$420.00

Z-40-BG Two-Stage Outfit, but with 18x48 inches, 53-gallon tank.....$465.00

Automatic pressure stopping device to automatically stop either outfit at 135 to 150 pounds (not automatic starting), extra.....$ 27.00

Automatic low pressure alarm set at any desired pressure including bell and wiring, no batteries (two dry cells required).....$ 7.50

CURTIS SINGLE AND TWO-STAGE AIR COMPRESSORS

The efficiency of a two-stage compressor depends directly on the degree of the intercooling effected. CURTIS Intercoolers are made of COPPER with thin radiating fins rigidly attached to the tube—135% greater heat radiating properties than cast iron—100% greater than steel pipe—22% better than aluminum. Excepting gold and silver, copper radiates heat faster than any other metal.

Made in one size only.

Bore Low Pressure Cylinder	3 inches
Stroke Low Pressure Piston	3 inches
Bore High Pressure Cylinder	1⅝ inches
Stroke High Pressure Piston	2½ inches
Displacement at 210 R. P. M. (Min.)	2.6 cu. ft.
Displacement at 280 R. P. M. (Std.)	3.4 cu. ft.
Displacement at 410 R. P. M.	5.0 cu. ft.
Displacement at 550 R. P. M.	6.6 cu. ft.
Electric Motor H. P. recommended at 210 R. P. M.	¾ H. P.
Electric Motor H. P. recommended at 280 R. P. M.	1 H. P.
Electric Motor H. P. recommended at 410 R. P. M.	1½ H. P.
Electric Motor H. P. recommended at 550 R. P. M.	2 H. P.
Pulley Size	16½" dia., 2¾" face
Shipping Weight	T. & L. P. 175 lbs.; T. P. 155 lbs.
Price No. 20-T, Tight Pulley only	$146.90
Price No. 20-L, Tight and Loose Pulleys	154.10

STYLE "S" TWO STAGE OUTFIT

These outfits are complete, including air compressor with hand unloader and tight pulley only (see extra if loose pulley is wanted); also steel pressure tank, air gauge, drain cock, outlet cock from tank with 20 feet of hose with tire chuck, and piping complete between the compressor and tank, as illustrated.

Data S-20 or S-20-A Outfit			Prices S-20 and S-20-A Outfits						
Com. or Sp.	Cu. Ft. Displacement	H. P. Required 200 lbs. Max. Air Pres.	Style and Number	Size Tank	Capacity Tank in Gals.	Price T. P. Only	App. Sh. Wt.	Price T. & L. P.	App. Sh. Wt.
210	2.6	¾	S-20-A	16x36	52.5	$208.00	380	$214.50	400
280	3.4	1	.....	.....	.....	.....	.....	.....	.....
410	5.0	1½	.....	.....	.....	.....	.....	.....	.....
550	6.6	2	S-20*	18x48	32.2	227.50	360	234.00	380

STYLE "W" TWO STAGE OUTFITS
(Belted Only)

Outfit consists of No. 20T Curtis Two-Stage Compressor, A. C. or D. C. Motor, as ordered, with motor pulley, self-adjusting idler and single leather drive belt; motor and compressor mounted on cast iron base.

Style and No.	Motor H. P.	Com. Speed	Cu. Ft. Displacement	D. C. 110–220 Volts	A. C. Sg. Ph. 60 Cy. 110–220 Volts	A. C. 2or3Ph. 60 Cy. 110–220 Volts	Wt.	Extra Auto. Starting and Stopping Device
*W-20	¾	210	2.6	$371.90	$386.20	$364.80	330	$57.00
W-40	1	280	3.4	384.80	399.00	370.50	350	71.30
W-60	1½	410	5.0	420.40	505.90	399.00	425	106.90
W-80	2	550	6.6	520.10	570.00	470.30	450	106.90

INFORMATION WANTED ON ALL OUTFITS

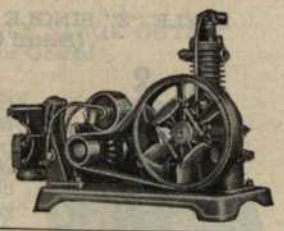
Whether belted or geared.

If direct current, give voltage.

If alternating current, give voltage, number of cycles and phase.

STYLE "W" SINGLE STAGE OUTFITS
(Belted or Geared)

Outfit includes compressor and motor of size listed, self-adjusting idler and single leather drive belt or cut fly wheel gear and rawhide pinion as desired; all mounted on cast iron base as illustrated opposite; no tank.



Style and No.	Motor H. P.	Complete with Motor				Extra for Auto. Starting and Stopping Device
		D. C. 110–220 Volts	A. C. 60 Cy. Sg. Ph. 110–220 Volts	A. C. 60 Cy. 2 or 3 Ph. 110–220 Volts	App. Shipping Weight	
W-1	¼	$194.40	$224.10	$224.10	160	$60.00
*W-2	½	256.50	283.50	283.50	245	60.00
W-3	¾	283.50	364.50	315.90	300	67.50
*W-4	1	367.20	413.10	337.50	350	75.00
W-5	3	686.10	683.10	495.00	675	112.50

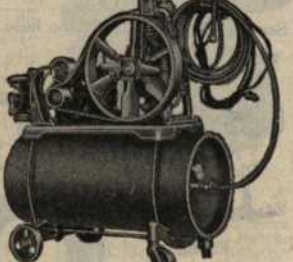
STYLE "Y" SINGLE STAGE OUTFIT

Style Y-1-A Portable Outfit, illustrated opposite, includes 1⅝x2 inch compressor, fan fly wheel, with internal gear, ¼ H. P. Motor, either A. C. or D. C. as desired, expansion chamber, snap switch and drain cock, 20 feet of electric cord and plug, 15 feet of best grade pump tubing with tire chuck and air gauge, combination push bar handle and hose rack; all mounted on cast iron base running on large diameter wheels. Not furnished for 25 or 40 cycle current or for three-phase current. Price $195.00

Y-1-B Stationary Outfit same as above, but no push bar handle, no electric cord, nor wheels. Price $187.50

STYLE "X" TWO STAGE OUTFIT
(Belted Only)

Includes compressor, motor and tank of sizes listed, self-adjusting idler and single leather drive belt. Piping between compressor and tank, 20 feet of hose with tire chuck, 20 feet of cord with plug and switch. Outfit mounted on wheels.



Style and No.	Motor H. P.	Com. Speed	Size Tank	D. C. 110–220 Volts	A. C. Sg. Ph. 60 Cy. 110–220 Volts	A. C. 3 Ph. 60 Cy. 110–220 Volts	Wt.	Extra Auto. Starting and Stopping Device
*X-20	¾	210	16x36	$487.40	$501.60	$473.10	590	$57.00
X-20-A	¾	210	18x48	525.80	540.10	513.00	630	57.00
X-40	1	280	16x36	501.60	517.90	487.40	610	71.30
X-40-A	1	280	18x48	555.80	570.00	527.30	650	71.30
X-60	1½	410	18x48	655.50	741.00	634.10	700	106.90

NOTE—No extra charge for California tanks on "X" two-stage outfits, but tanks furnished are approved in California for 150 pounds pressure, instead of 200 pounds.

Tanks listed not suitable in Detroit, Chicago or Canada.

For 25 or 40 cycle alternating current motors, increase list on "W" single stage outfits 20%; "W" and "X" two stage outfits, 15%.

Automatic device on two stage outfits cuts in at 140 pounds and out at 175 pounds, except in California where same cuts in at 120 pounds and out at 150 pounds same as on single stage outfits.

EXTRA—For equipping "X" outfits with oil-proof rubber tires on wheels, add $12.80.

***Popular size garage outfits. ALL PRICES SUBJECT TO DISCOUNT.**

No. 14 COLUMBIAN GASOLINE OR OIL PUMP

This Pump is a lever action type, discharging on the up stroke of the plunger (down stroke of lever). It works smoothly and easily, discharging 1 pint to the stroke. It stands at a convenient height and the lever works on a short stroke. The lever is so arranged that when it is down it can be locked with an ordinary padlock. An anti-drip Automatic Nozzle is provided on the pump, which opens and closes as the pump is operated. This nozzle is made of brass, nickel-plated, and has ¾-inch bibb threaded for hose connection. It can be placed up to 100 feet from the Storage Tank and the suction will lift up to a height of 12 feet. Connects to tank with ¾-inch galvanized pipe.

No. 14—Pump only. . . . . Each, $32.80

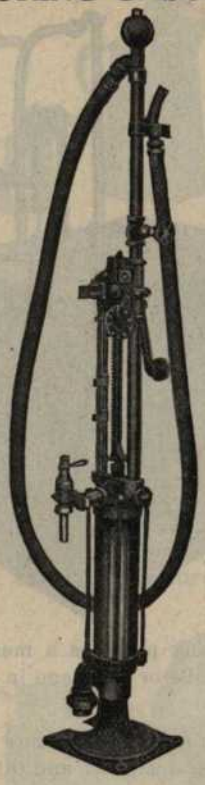
2½-inch Combination Fill and Vent Pipe, 3 feet long, with strainer and cap with lock. . . . . Each, $10.00

¾-inch Galvanized Suction Pipe with strainer, special bushing and ground joint union ell. . . Each, $ 8.00

Graduated Gauge Stick. . . . . Each, $ 2.00

For Storage Tanks to be used with these Pumps, refer to next page.

No. 16 COLUMBIAN SELF-MEASURING GASOLINE PUMP



This Pump is a 1-gallon stroke type, measuring gallons, half gallons and pints, a simple adjustment regulating the quantity. The Pump is made throughout of the finest material obtainable. Every working part is perfectly machined and ground, assuring true adjustment and free movement. It is highly finished in red enamel with nickel trimmings, making a splendid appearance. (When furnished for kerosene or oil, Pump is painted green.) The cylinder is of heavy seamless brass; valves, plunger and plunger rod, stuffing box and gland and nozzles are made of brass. A lock, in-built and a part of the working head of the pump, locks the crank in a rigid position, providing safety from meddling and theft. The gallon-dial, numbered from 1 to 10, registers full gallons as drawn and repeats. Totalizing meter is also furnished, which is also entirely automatic. It registers all that is drawn, regardless of quantity, keeping a continuous total up to 10,000 gallons.

No. 16—Gasoline Pump Complete as shown with 10 ft. length 1-inch Hose—Hose Tip, Overhead Drain and Totalizing Meter—also 1½-inch Double Check Brass Foot Valve (not shown). . . . . Each, $218.50

No. 19 COLUMBIAN GASOLINE OR KEROSENE PUMP

This is our simplest and lowest price gasoline or kerosene storage system, though its uses are many. This little outfit is found indispensable in the private garage, in the store, shop or factory, or on the farm, where the investment in the higher priced system is not warranted. The pump is of double cylinder type, discharging on both the up and down stroke, and operating with ball valves. Made almost entirely of brass. The system is so simple and effective that it never fails to fill its purposes to the utmost satisfaction of the user.

No. 19—Pump only. . . . . Each, $15.00

2 -inch Combination Fill and Vent Pipe, 3 feet long with strainer and cap with lock. . Each, $10.00

¾-inch Galvanized Suction Pipe, with strainer, special bushing and ground joint union ell. . . . . Each, $ 8.00

Graduated Gauge Stick. . . . . Each, $ 2.00

No. 22 Columbian Self-Measuring Storage System for Lubricating Oils

This Pump and Tank provides a means of storing and handling lubricating oils or kerosene in a convenient, compact, clean manner.

The tank and pump are built into one unit. All openings are covered, excluding dust, dirt and other foreign matter. The tank is substantially made. The pump is made with heavy seamless cylinder, brass valves, plunger and stuffing box. The working head, ratchet bar, etc., are of strong construction and securely fastened to tank. An anti-drip nozzle stops the flow of oil when the pump stroke ceases.

Furnished with quart stroke pump, measuring pints and quarts, or gallon stroke pump, measuring pints, half-gallons, and gallons.

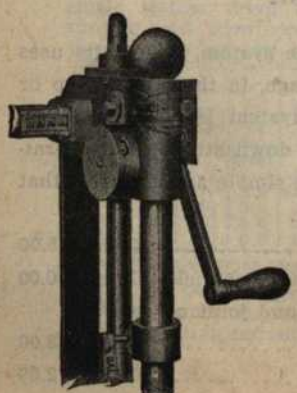
Quart Stroke.

65 Gallon Size	55.00
120 Gallon Size	62.50
170 Gallon Size	70.00

Gallon Stroke.

65 Gallon Size	63.75
120 Gallon Size	71.25
170 Gallon Size	78.75

Totalizing Meter



This view shows the pump head of No. 16 Pump with Totalizing Meter attached. By the use of this attachment an accurate check on the amount of gasoline or oil that passes through the pump can be kept. It is impossible to draw a spoonful of liquid without the meter registering. It records up to 10,000 gallons and repeats. The quantity is represented in plain figures, having no confusing dials or pointers. This meter should be attached to the pump at factory.

Totalizing Meter .....Each, 18.75

Columbian Underground Tanks

In the manufacture of Columbian Undergound Stora Tanks riveting, calking and soldering are completely d carded. Expert handling of the electric welding proc merges the copper bearing steel sheets into a mono-metal unit—virtually one piece of metal. They have following equipment: 4 in. opening for suction stub, in. for filler pipe, 1 in. for vent pipe (plugged), 1½ galvanized suction stub with special bushing and strain (without foot valve), 2½ in. combination fill and vent p with strainer cap and lock, graduated gauge stick. F nished in either Galvanized or Black Steel.

Galvanized.

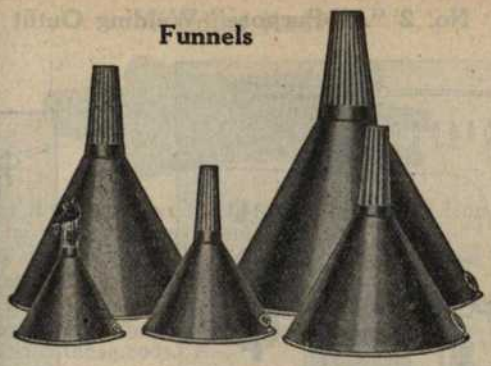
Capacity Gallons	Size Inches	Gauge	Wt. lbs.	Ea
65	26 x 28	16	100	53
120	30 x 39½	16	130	60
170	37½x 35	16	170	76
220	37½x 46	16	200	84
280	37½x 58½	14	265	100
335	37½x 70	14	300	108
390	37½x 81½	14	340	116
445	37½x 93	14	365	125
500	37½x104½	14	390	135
550	37½x115	14	420	145
800	45½x114	12	685	200
1000	45½x144	12	825	240

Black Steel

Cap. Gallons	Size, Feet	No. 12 Gauge Shpg. Wt.	No. 12 Gauge Price	No. 10 Gauge Shpg. Wt.	No. 10 Gauge Price	3/16-in. Steel Shpg. Wt.	Pri
260	3 x 5	320	105.00	400	129.00	510	139
350	3½x 5	390	118.00	485	146.00	620	160
460	4 x 5	475	132.00	585	164.00	750	200
510	4 x 5½	500	138.00	625	173.00	800	207
560	4 x 6	530	145.00	660	182.00	850	218
725	5 x 5	630	163.00	780	208.00	1000	263
870	5 x 6	700	175.00	865	220.00	1110	279
1015	5 x 7	770	187.00	950	238.00	1230	302
1160	5 x 8	840	200.00	1040	255.00	1350	322
1250	6 x 6	880	207.00	1090	267.00	1410	332
1485	6 x 7	955	218.00	1200	278.00	1530	352
1675	6 x 8	1040	235.00	1300	300.00	1670	380
2000	6 x 9½	1170	256.00	1470	322.00	1910	411
2100	6 x10	1210	264.00	1520	333.00	1980	425
2525	6 x12	....	.....	....	.....	2260	504
3150	7 x11	....	.....	....	.....	2550	555
4000	7 x14	....	.....	....	.....	3050	717

Tanks of 3/16 material bear Fire Underwriters' label.

Funnels



Made of polished tin plate in six sizes. Substantially made and will give good service. All sizes 1 dozen in bundle.

No. 015—½-pint, 3½-inch diam. top.....Per doz., $1.00
No. 020— 1-pint, 4½-inch diam. top.....Per doz., $1.30
No. 025— 1-quart, 5½-inch diam. top.....Per doz., $1.90
No. 030— 2-quart, 6¾-inch diam. top.....Per doz., $2.60
No. 035— 4-quart, 8 -inch diam. top.....Per doz., $3.50
No. 060— 6-quart, 9½-inch diam. top.....Per doz., $4.90

Especially intended for use with tractors. Made of heavy galvanized iron and very substantial. Removable hoop for chamois. 8-quart dia., top 12¼ ins., height 12 ins. Outlet 1⅛ ins. Weight 3½ lbs.

No. 51.....Each, $2.30

Brookins All-in-One Liquid Measure

An All-in-One Liquid Measure with flexible metal spout which can be placed in any position to fill any crank case without the use of a funnel. Valve under control of thumb lever at all times. Spring to keep valve closed unless held open by thumb lever. Rigid hook to keep spout up against measure when not in use to prevent dripping. Copper finish.

1 Quart Size.....Each, 3.00
2 Quart Size.....Each, 3.50
1 Gallon Size.....Each, 4.50

Utility Measures and Funnels

Furnished in either tin or galvanized. All joints and handle well soldered. Pint size 2 dozen, larger sizes 1 dozen in a package.

No. 83—1-pint, tin.....Per doz., $3.90
No. 84—1-quart, tin.....Per doz., $4.80
No. 85—2-quart, tin.....Per doz., $6.90
No. 86—4-quart, tin.....Per doz., $9.80
No. 384—1-quart, galvanized.....Per doz., $6.70
No. 385—2-quart, galvanized.....Per doz., $8.80

Garage Measure

This is a very popular style of 5-gallon measure, on account of the elbow spout. Made of galvanized steel, all seams welded, heavy band shrunk on bottom. Diameter 12 inches. Height 18 inches.

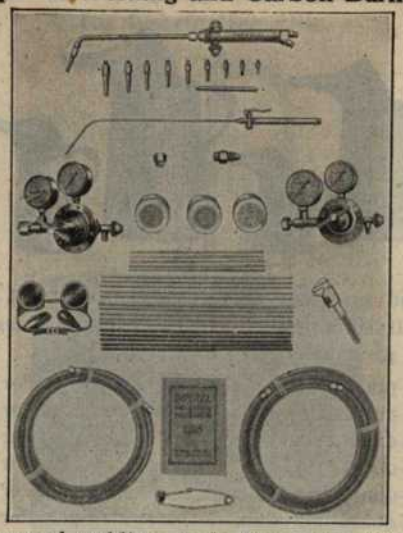
No. CT1.....Each, $12.00

Radiator Filling Cans

Made especially for filling automobile radiators. The spout is small enough and tipped at just the right angle to pour water into the opening of radiator and will not splatter over the front and sides. 10-quart capacity. Galvanized. ½ dozen in a crate.

No. 5—10-Quart.....Per doz., $20.00

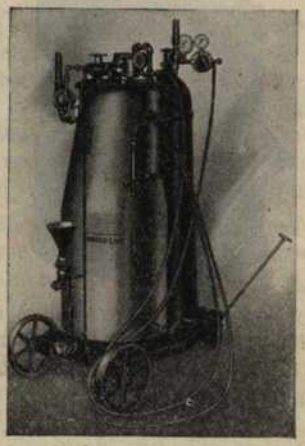
No. 1 Imperial Welding and Carbon Burning Outfit



For all general welding work, from thin sheet metal to heaviest castings. Consists of Type B Imperial Welding Torch with 10 welding tips, extension, carbon burning torch, regulators, 4 gauges, hose, connections, goggles, hand-book, carrying case, complete supply of welding materials and spark lighter, ready for service.

No. 1. . . . . Each, 75.00

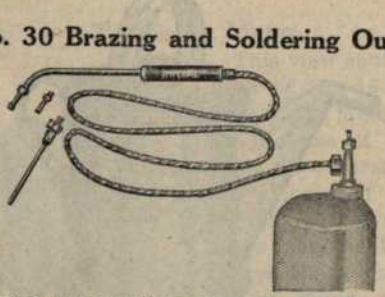
Welding Outfit and Generator on Truck



We are in position to furnish Acetylene Generators in various sizes for use in connection with Welding, Carbon and Lead Burning Outfits, also a full line of Torches, Gauges, etc., for this class of work.

Special catalog and information furnished on request.

No. 30 Brazing and Soldering Outfit

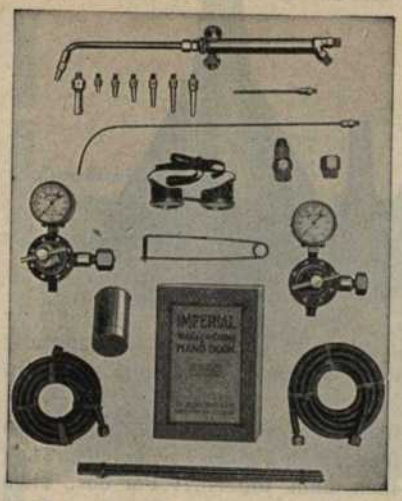


Ideal for radiator repair work and can also be used to advantage for all kinds of soldering, brazing and light preheating work in garages and repair shops. The torch burns acetylene and the tip draws in the necessary oxygen from the atmosphere, making it economical to use. The tank connection fits the small automobile acetylene light (Presto) tank, but the outfit can be used on large size cylinders by means of an adaptor fitting.

Outfit consists of Type A0 Torch, 3 Tips (one with long spout for radiator soldering), 6 ft. of Hose and Connections.

No. 30. . . . . Each, 4.50

No. 2 "All-Purpose" Welding Outfit

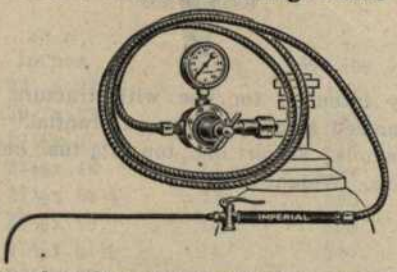


For the every-day requirements of the average garage or small repair shop. It does Welding, Carbon Burning, Lead Burning, Radiator Soldering, Brazing, Preheating, and at an extra charge a Cutting Attachment is furnished, which will cut steel and wrought iron up to 3 inches in thickness. Consists of Type "BB" Imperial Welding Torch, with 6 Welding Tips, Carbon Burning Tip, Lead Burning Tip, Radiator Soldering Tip, Brazing Tip, Regulators, 2 Gauges, Hose, Connections, Goggles, Hand-Book, Welding Rod, Flux and Spark Lighter.

No. 2—Outfit. . . . . Each, 44.50

No. 2—Cutting Attachment, extra. . . . . Each, 10.00

No. 6 Carbon Burning Outfit



All traces of carbon can easily be removed from the cylinders of an automobile engine with the Imperial Carbon Burning Outfit in less than thirty minutes, at the small cost of from 10 to 15 cents per cylinder. This is a wonderful improvement over the old, expensive and slow process of removing carbon by scraping the cylinder. Outfit consists of Type G Carbon Burning Torch, Type D Regulator, Gauge, Hose, Connections, etc.

No. 6. . . . . Each, 15.00

No. 86H Welding and Cutting Goggles

The No. 86H Goggles are light, rust-proof, sanitary, strong and perfect fitting. Amber lenses of just the right density give full protection to the eyes. Easily renewable, plain glass cover lenses protect the amber lenses from blistering. Can be worn with comfort.

No. 86H. . . . . Per pair, 2.00

Welding Rods

Special Rods for Cast Iron—Specially refined iron—easy flowing, producing strong welds.

Armco Rods—For all mild steel welding—highest purity—free from all injurious ingredients.

Pure Cast Aluminum Rods—Special alloy, for welding any Aluminum. Chemically pure Aluminum Flux should be used with these rods.

Drawn Bronze Rods—For brazing steel and cast iron—made of pure new metal of special composition to work under the Oxy-Acetylene flame. Our chemically pure brass flux should be used in conjunction.

Brass Spelter Wire—For Brazing.

Rep Flux and Rep Rods—For filling scored cylinders and mending cracked water jackets.

	Size, in.	Per lb.
Special Rods for Cast Iron	1/4	.14
Special Rods for Cast Iron	3/16	.15
Armco Rods for Mild Steel Welding	1/4	.16
Armco Rods for Mild Steel Welding	3/16-5/32	.16
Pure Cast Aluminum Rods	1/4	.80
Drawn Bronze Rods	3/16-1/8	.52
Brass Spelter Wire	1/8	.60
Rep Flux		3.50
Rep Rods		3.00

Imperial Welding Flux

No. 20-H—For welding Cast Iron, ½ lb. cans..Per lb., .40
No. 21-H—For welding Brass, Bronze and Copper, ½ lb. cans.....Per lb., .50
No. 22-H—For welding Aluminum, ½ lb. cans.Per lb., 2.00

Climax Welding Compound

Welds all grades of steel at the lowest possible heat that steel can be welded.

5-lb. Boxes.....Per 100 lbs., $26.00
10-lb. Boxes.....Per 100 lbs., $26.00
25-lb. Boxes.....Per 100 lbs., $21.60
50-lb. Boxes.....Per 100 lbs., $21.60
100-lb. Boxes.....Per 100 lbs., $21.20

E-Z Welding Compound

Sticks to metal at a low heat and is equally good for Lap, Split, "V" Butt or Jump welding. It will weld Tool, Plow, Open Hearth and Bessemer Steel.

5-lb. Boxes.....Per 100 lbs., $25.00
50-lb. Boxes.....Per 100 lbs., $23.00

Boraxette

A welding flux for all grades of steel; it does not have to be applied between welds like other compounds, but is applied to the outer surface of the work.

Welds all grades of steel at the lowest possible heat that steel can be welded. Especially adapted to plow work.

5-lb. Boxes .....
....Per 100 lbs., $26.00

Refined Borax

Refined Borax is especially adapted to welding plow steel, spring steel, cultivator shovels, etc.

Lump or Granulated.

5-lb. Sacks.....Per 100 lbs., $20.00
10-lb. Sacks.....Per 100 lbs., $19.00
25-lb. Sacks.....Per 100 lbs., $18.00
50-lb. Sacks.....Per 100 lbs., $17.00
400-lb. Barrels.....Per 100 lbs., $16.00

Powdered.

5-lb. Boxes.....Per 100 lbs., $32.00

Soldering Coppers

No.	Weight per pair, lbs.	Per pair
½	½	$0.66
1	1	$0.88
1½	1½	$1.20
2	2	$1.54
3	3	$2.10
4	4	$2.84
5	5	$3.60

Wire Solder

Made by improved process with hydraulic machinery which not only insures absolute uniformity in composition, but makes the wire perfectly smooth and of an even size throughout its entire length. No. 9 wire, strictly ½ and ½.

We will cut to any desired length.

No. 5— 5-lb. Spools.....Per lb., Market

No. 50—50-lb. Spools.....Per lb., Market

Bar Solder

STRICTLY HALF & HALF

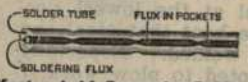
No. 333—Warranted. Half and half.....Per lb., Market

No. 444—Strictly half and half.....Per lb., Market

No. 777—Commercial half and half.....Per lb., Market

Kester Acid-Core Wire Solder

A self-fluxing wire solder. The solder is a hollow wire, filled with an acid flux which flows as the solder is used. Will solder any metal except aluminum. Is cheaper to use than Solid Wire or Bar Solder, as no time is lost hunting, preparing or applying the flux.



Kester Acid-Core wire Solder

Use it for radiator leaks, spark plug terminals, gasoline pipe and tank joints, battery terminals, cracked fenders, electrical connections, speedometer flexible shaft and general garage use.

1-lb. Spools.....Per lb., Market
5-lb. Spools.....Per lb., Market
10-lb. Spools.....Per lb., Market

Kester Rosin Core Wire Solder

Same as above except core is rosin. Especially adapted for electrical work.

1-lb. Coil.....Per lb., Market
5-lb. Col.....Per lb., Market

Kester Metal Mender in Display

Same as Kester Acid Core Wire Solder except in handy 4-oz. tin containers. For use in the household, around the automobile and for general metal mending. Packed 10 cans in handsome display stand with which is included circulars and sales help.

Per Carton of 10 cans. . . . .Market

High Grade Babbitt Metal

The different grades are furnished either in bulk or sliding cover wood boxes, containing about 10 lbs.

Stowe's Motor is a very high-fusing anti-friction metal. For use as a bearing metal in motors of automobiles and motor boats, and work where a very hard and tough material is required.

Stowe's Nickel is a high-grade, nickel-hardened, tin base, anti-friction metal. For very heavy journal pressure and high speed of street car motor armature bearings and all similar extremely hard service.

Puritan "A" is a copper-hardened, anti-friction metal. For use in journal bearings of high speed planer spindles, heavy rolls of steel mills, ore crushers, gas and gasoline engines.

Puritan "B" is a strictly anti-friction metal. For use in bearings of steam engines, oil and cotton mill machinery, rolls of flour mills, band saws, fans and blowers.

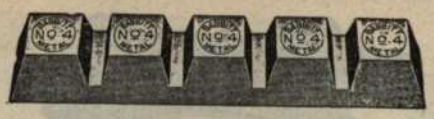
All grades, in boxes.....Per lb., Market
All grades, in bulk.....Per lb., Market

Magnolia Metal

An anti-friction high-speed metal. Approximate weight per bar, 5¾ lbs.

Magnolia . . . . . .Per lb., Market

Common Babbitt Metal



	Approx. Wt. Per Bar	
No. 1.....	6⅝ lbs.	Per lb., Mark
No. 2.....	6¾ lbs.	Per lb., Mark
No. 3.....	6¾ lbs.	Per lb., Mark
No. 4.....	7 lbs.	Per lb., Mark

Special Anti-Friction Metal

A high-speed metal. Will answer same purpose as Magnolia, but at a lower price. Approximate weight per bar 4½ lbs.

Special Anti-Friction.....Per lb., Marke

Bronze Bushings

Gilbert Phosphor Bronze is a special high tension alloy having an ultimate tensile strength of 52,000 lbs.; it has successfully withstood hydraulic pressure of over 6,000 lbs. per square inch; after a speed record test of 312 hours a ⅞-inch by 7 bushing on a spindle operating at 14,500 R. P. M. showed a wear of less than .003 inch.

Velox Phosphor Bronze is a special bearing composition and should be used in bearings at ordinary speeds and heavy pressures—Locomotives and Car Journal Bearings, piston rings, mill and crusher bearings, etc.

L'gth ins.	O. D. ins.	Diameter of Cores, ins.								
12	1	½								
12	1⅛	⅝	½							
12	1¼	¾	⅝	½						
12	1⅜	⅞	¾	⅝	½					
12	1½	1	⅞	¾	⅝	½				
12	1⅝	1⅛	1	⅞	¾	⅝	½			
12	1¾	1¼	1⅛	1	⅞	¾	⅝	½		
12	1⅞		1¼	1⅛	1	⅞	¾	⅝		
12	2		1⅜	1¼	1⅛	1	⅞	¾		
12	2⅛		1½	1⅜	1¼	1⅛	1	⅞	¾	
12	2¼		1⅝	1½	1⅜	1¼	1⅛	1	⅞	¾
12	2⅜			1⅝	1½	1⅜	1¼	1⅛	1	⅞
12	2½			1¾	1⅝	1½	1⅜	1¼	1⅛	1

The table of approximate weights shown below is based on solid round bars 12 inches long. To determine the weight of a cored bar deduct the weight of a solid bar, the size of the core, from the weight of a solid bar of the size wanted.

Diam., ins.	Wt. per ft., lbs.	Diam., ins.	Wt. per ft., lbs.	Diam., ins.	Wt. per ft., lbs.
½.....	¾	1¼.....	4⅝	2 .....11¾	
⅝.....	1¼	1⅜.....	5½	2⅛.....13⅛	
¾.....	1¾	1½.....	6⅝	2¼.....14¾	
⅞.....	2¼	1⅝.....	7¾	2⅜.....16½	
1	3	1¾.....	9	2½.....18¼	
1⅛.....	3¾	1⅞.....10¼			

Staple sizes in round solid or cored bars, 12 inches long, are carried in stock. Other sizes from factory. Can furnish hexagon and square bars, also larger sizes for shipment from factory.

Gilbert High Speed Bronze.....Per lb., Market
Velox Bronze. . .....Per lb., Market

No. 205 Turner Torch

A single needle torch made to meet the demand for a low priced torch. Polished Brass Tank, funnel shaped bottom. Capacity 1 quart. Weight 4 lbs.

No. 205.....Each, 8.35

Packed 1 in a carton.

No. 405 Turner Torch

This single needle torch is to compete with ordinary torches which operate only on gasoline. Polished brass tank. Capacity 1 quart. Weight 3½ lbs.

No. 405.....Each, 10.00

Packed 1 in a carton.

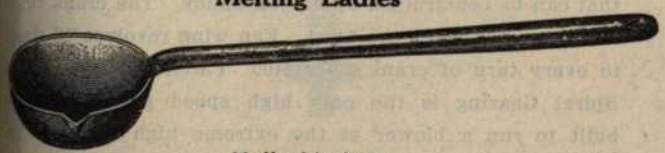
No. 9 Turner Torch

A torch that will give satisfaction to any one who prefers a pint capacity. Has the shut-off and needle valve separate, Baffle in the burner and other improvements make this Turner Torch operate on gasoline or kerosene. The pump is in the tank, funnel shaped bottom with Turner Patented filler plug. Polished Brass Tank. Capacity, 1 pint. Weight 3 pounds.

No. 9.....Each, 11.10

Packed 1 in a carton.

Melting Ladles



Malleable Iron.

No.	Bowl, Ins.	Handle, Ins.	Capacity, lbs.	Per Doz.
7800A	3	12¼	2	$ 5.30
7800B	4	12¼	4	$ 5.60
7800C	5	14¼	7	$11.70
7800D	6	15¼	12	$13.40

No. 38 Turner Torch

Turner New Line Gasoline Torch, contains the latest improvements. Baffle in the burner and other improvements make this Turner Torch operate on gasoline or kerosene. This burner is fitted with soldering iron holder. Polished Brass Tank. Capacity, 1 quart. Weight, 4 pounds.

No. 38.....Each, 12.00

Packed 1 in a carton.

No. 43 Turner Torch

The tank having only one opening which is on top makes it impossible to overfill the torch. This construction materially reduces the possibilities of leaks which cause explosions, loss of lives and damage to property. Made with the safety valve which makes them safe torches for all purposes. It is impossible to pump too great amount of air into the tank and cause leaks. It also has an air release which enables the operator to relieve all air pressure from the tank. The burner is scientifically constructed, having the baffle in the burner on which the flame is constantly applied, thus generating the present low grade gasoline or kerosene and producing 400 degrees more heat than any other type of torch. The flared tube in front of the fuel jet automatically syphons the correct proportion of air regardless of the size of flame. Shut-off and needle valve separate—impossible to enlarge the orifice. Polished Brass Tank. Capacity, 1 quart. Weight, 4 lbs.

No. 43.....Each, 12.00

Packed 1 in a carton.

No. 48 Turner Torch

Has the famous Double Jet which has a world-wide reputation for its extreme heat and absolute satisfaction. This wonderful burner with one opening in the tank, pistol grip handle, with air release and safety valve, makes a torch that answers a long felt want. This torch can be used for light brazing, annealing light material, brazing wire and on rubber tires and cable work. Produces a high degree of heat. Baffle in the burner and other improvements make this Torch operate on gasoline or kerosene. The tank is of heavy-gauge polished brass, strong enough to withstand all abuse. It is hard to recommend this torch for any particular line of work as it will answer every need of a blow torch. The lowest priced blow torch for the extreme heat produced. Polished Brass Tank. Capacity, 1 quart. Weight, 4¼ pounds.

No. 48.....Each, 14.95

Packed 1 in a carton.

No. 34 Turner Furnace

The burner is made of Turner Bronze Burner Metal and is attached to a swivel joint. It gives a flat flame of intense heat. The tank is made of heavy gauge steel reinforced at every joint. Equipped with Turner Automatic Pump. The heaviest soldering coppers are heated and a pot of metal melted at the same time and with positively minimum consumption of gasoline. The Turner non-leaking filler plug is furnished with this furnace. Recommended for tinners, iron and copper workers, plumbers and electricians. Capacity, 7 pints. Weight, 17 pounds.

No. 34.....Each, 18.08

Packed 1 in a carton.

Champion Midway Forges

A spiral gear, direct drive Forge for all kinds of Built strong and powerful. All gears are supplied bushed journal bearings on both sides of the gear ball bearings on the high speed shaft and are made durable metals. Gears run in dust-proof casing. turns in either direction.

Cast Iron Hearth, 23x35 inches; height, 30 inches; 10 inches in diameter. Cut shows with half hood.

No. 72—With Shield. Weight 215 lbs.....Each, $

No. 73—With Half Hood. Weight 225 lbs.....Each, $

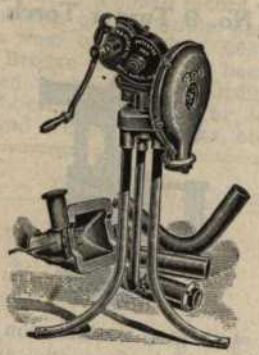
Champion Eureka Geared Forges

Champion Eureka Geared Forges are designed for light and medium work on farms, plantations and in garages where a comparatively lightweight Forge is desirable. The fan is driven by cut helical gears running smooth and noiseless in a dust-proof oil-tight gear case. The hearth is stamped from a single steel sheet of extremely heavy thickness, making a lightweight low-priced rigid Forge for general agricultural use. The legs are bolted to the hearth with a heavy steel leg socket, and are strongly braced. Nos. 145S and 146S have cast iron hearths, diam. 18 inches. Height 30 inches. Fan 10 inches.

No. 145S—With Shield. Weight 55 lbs.....Each, $24.70

No. 146S—With Half Hood. Weight 60 lbs...Each, $27.70

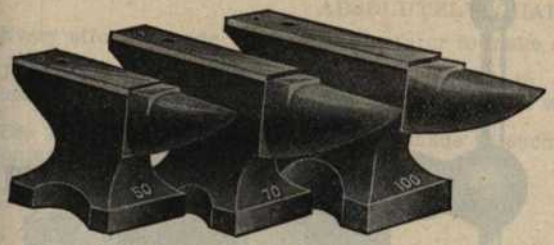
Champion Blower



In this Blower the Gearing and Adjustable Ball Bearing are constructed from the highest grade of phospho bronze and tool steel with adjustable ball bearings turne from the highest grade of tool steel, with cups and cone hardened and ground to the highest possible polish, thus making the most durable, practical bearings and gearing that can be constructed by human hands. The crank turns either way to make the blast. Fan wing revolves 46 times to every turn of crank. The 400 "Patented" High Speed Spiral Gearing is the only high speed gearing that is built to run a blower at the extreme high speed necessary to produce a roaring, white heat pressure blast without destruction to the gearing as well as the bearings. With "Whirlwind" Blast, Tuyere Iron, Fan 12-inch diameter, complete with Piping. Weight complete 165 lbs.

No. 400.....Each, $58.00

Cast Anvils



A solid cast semi-steel Anvil, made of steel and a special alloy mixture properly proportioned.

Painted black, faces are ground, polished and lacquered. Exactly what every garage man, farmer and handy man wants and needs.

An excellent anvil for all ordinary shop and farm use; well worth the price and a big seller. They are not intended for heavy blacksmith work. On request we can quote on solid wrought anvils with steel face.

Shipped loose and takes fourth class freight rate.

Weight	Height	Width	Length
50 lbs.....	7¾ in.....	3⅛ in.....	14½ in.
70 lbs.....	8½ in.....	3½ in.....	18 in.
100 lbs.....	9¾ in.....	3½ in.....	20 in.
150 lbs.....	11 in.....	4 in.....	24 in.
200 lbs.....	12 in.....	5½ in.....	28 in.

Any size.....Per 100 lbs., $11.50

Anvil Hardies

No.	1	2	3	4	5	6	7
Shank, ins...	½	⅝	¾	⅞	1	1⅛	1¼
Cutter, ins...	1⅝	1¾	2	2	2⅛	2⅛	2⅛
Each.....	$0.80	$0.90	$1.00	$1.20	$1.30	$1.60	$1.70

Bench Screws

Wrought iron, double thread.

No.	Dia., ins.	Length, ins.	Wt. doz., lbs.	Per doz.
30.....	1	16½	65	$26.50
31.....	1⅛	16½	80	$30.00
32.....	1¼	17½	90	$35.50
33.....	1½	19½	140	$51.00

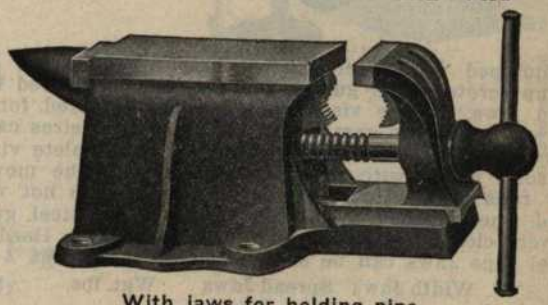
Solid Box Vises

BLACKSMITHS' PATTERN.

Shipped loose and takes second class freight rate.

No.	Weight lbs.	Length of jaws ins.	Depth from top of jaws to top of box, ins.	Vise opens ins.	Each
35.....	35	3¾	3¼	3¾	10.00
50.....	50	4½	4¼	4½	11.50
70.....	70	5¼	4¾	5¼	15.00
100.....	100	6	5½	6	22.00
150.....	150	7	6½	7	36.00
200.....	200	8	7½	8	56.00

Farmers' Combined Anvil and Vise



With jaws for holding pipe.

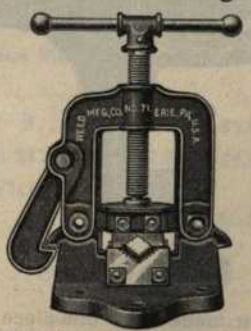
Adapted for light work. Has screw with cut threads and cold rolled steel handle.

Anvil and all finished parts polished and lacquered. Jaws are 3½ inches wide and open 3½ inches.

Shipped loose and takes third class freight rate.

No. 380—Weight 24 lbs.....Each, $4.20

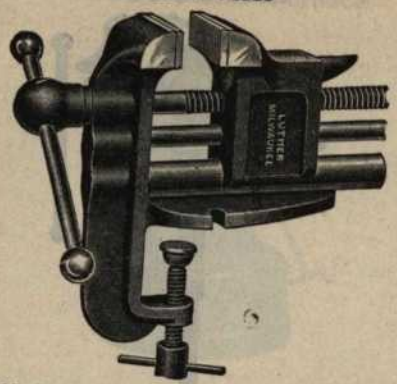
Reed Standard Self-Locking Pipe Vises



The jaws are milled from solid tool steel bars, carefully hardened, tempered in oil to give toughness, and each one tested. The bottom is flat so that it may be fastened to center of bench as well as at the end.

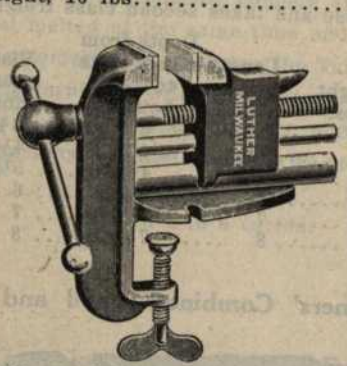
No.	Holds pipe, ins.	Weight each, lbs.	Each
71.....	⅛ to 2½.....	10.....	5.00
72.....	⅛ to 3½.....	16.....	7.50
73.....	⅛ to 4½.....	25.....	11.00

Luther Vises



These Vises are very strong. All parts of steel. Movable jaws travel on steel guides. Made with steel feed screw and steel clamp screw. Jaws are 3 inches wide and extend 4¼ inches. Finished in black enamel. No. V31 is same as V30, except it has attachment for holding pipe.

No. V30—Weight, 15 lbs.....Each, $6.75
No. V31—Weight, 16 lbs.....Each, $7.25



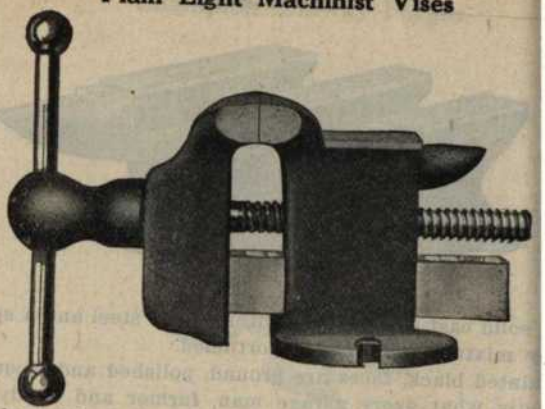
Equipped with steel handles, steel feed screws, steel clamp screws, steel guides and inserted corrugated hardened jaws. These vises are especially adapted for the workshop and the garage and in the smaller sizes can be carried in the automobile tool box. The complete vise is of solid metal with no hollow parts. As the movable jaw runs back or over the bench, the vise is not weakened when opened to its full spread. The steel guides fit very closely and tend to hold the jaw rigid. Hardened Steel Pipe Jaws can be supplied at an extra cost.

No.	Width Jaws	Spread Jaws	Wgt. lbs.	Each
V17	1¾	1¼	4	2.25
V20	2	2½	6	2.75
V22	2¼	2¾	7½	3.60

These vises are made with one-piece steel feed screws and handles, large thumb screws and bronze guide. Hand painted rich Brewster Green. Especially adapatable for shop use. Packed one in a carton.

No.	Width Jaws	Spread Jaws	Wgt. lbs.	Each
V91½	1½	1½	2¼	1.40
V92	2	2	4	2.00
V92½	2½	2½	6	2.75
V93	3	3	10	4.25

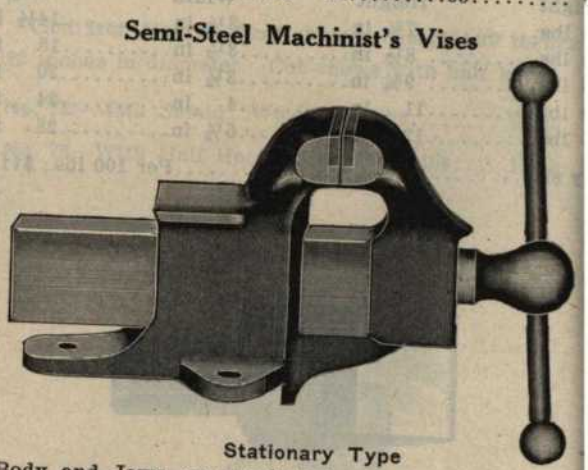
Plain Light Machinist Vises



Body and jaw of semi-steel; draw bar handle and sc machine steel; square thread, machine cut (not roll jaws accurately ground to perfect fit, and knurled. top of jaws and anvil face highly polished. It is ni finished in black enamel, trimmed in red.

No.	Width Jaws	Spread Jaws	Wgt. lbs.	E
2	2½ in.	2½ in.	12	
3	3 in.	3 in.	16	
4	4 in.	6 in.	35	

Semi-Steel Machinist's Vises

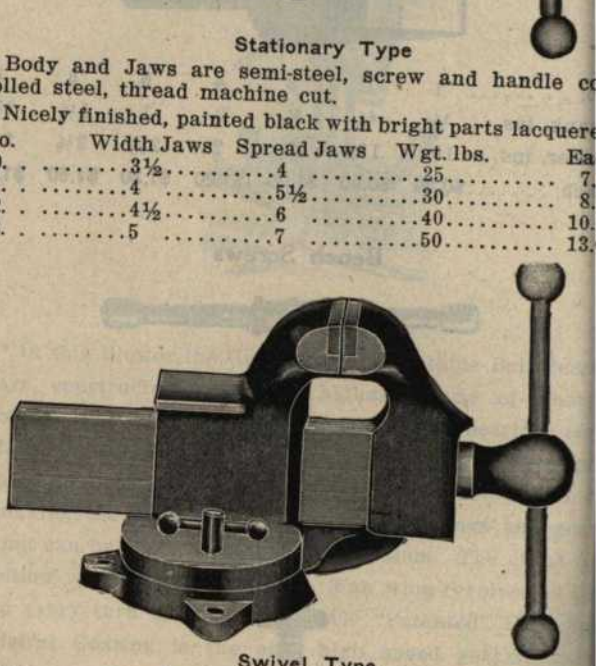


Stationary Type

Body and Jaws are semi-steel, screw and handle co rolled steel, thread machine cut.

Nicely finished, painted black with bright parts lacquere

No.	Width Jaws	Spread Jaws	Wgt. lbs.	Ea
10	3½	4	25	7.
11	4	5½	30	8.
12	4½	6	40	10.
13	5	7	50	13.



Swivel Type.

Body and Jaw are semi-steel, screw and handle cold rolled steel, thread machine cut.

Nicely finished, painted black with bright parts lacquered.

No.	Width Jaws	Spread Jaws	Wgt. lbs.	Each
14	3½	4	27	$18.00
15	4	5½	38	$23.00
16	4½	6	54	$29.00
17	5	7	60	$36.00

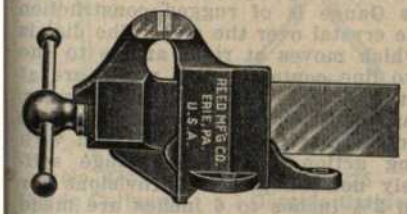
Reed's Machinist's Vises

ABSOLUTELY GUARANTEED AGAINST BREAKAGE

Every effort is made by the manufacturer to make each vise the best of its kind. Every vise fully guaranteed.

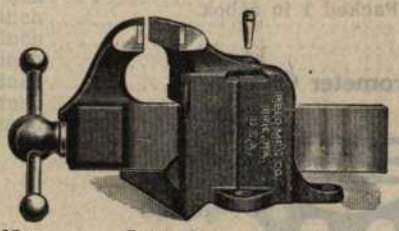
Jaws have tool steel facings, securely welded on, and are milled to size. The vises with Swivel Base are made so they can be turned in any position on an axis parallel with the floor, and give a positive grip with absolutely no slip.

The jaws on Swivel Jaw Models are made in such a way that the jaws adjust themselves to any irregular piece by tightening upon the screw.



STATIONARY JAW, STATIONARY BASE

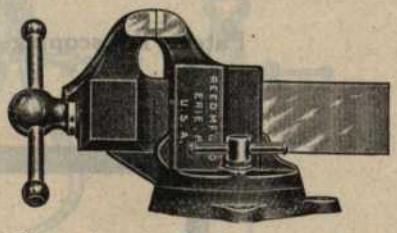
No.	Jaws, ins.	Opens, ins.	Wt., lbs.	Each
103½	3½	5	29	11.25
104	4	6	43	12.75
104½	4½	7	57½	15.50
105	5	8	73	20.00
106	6	10	135	39.00



SWIVEL JAW STATIONARY BASE

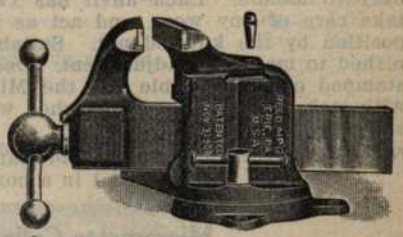
No.	Jaws, ins.	Opens, ins.	Wt., lbs.	Each
303½	3½	4	35	16.00
304	4	4¾	50	19.00
304½	4½	5½	66	22.00
305	5	6½	82	28.00
306	6	9	141	50.00
307	7	11½	196	65.00

STATIONARY JAW SWIVEL BASE



No.	Jaws, ins.	Opens, ins.	Wt., lbs.	Each
202½	2½	3½	20	12.00
203	3	4	27	13.00
203½	3½	5	38	15.00
204	4	6	51	17.00
204½	4½	7	66	20.00
205	5	8	89	30.00
206	6	10	153	52.00
207	7	12	204	70.00

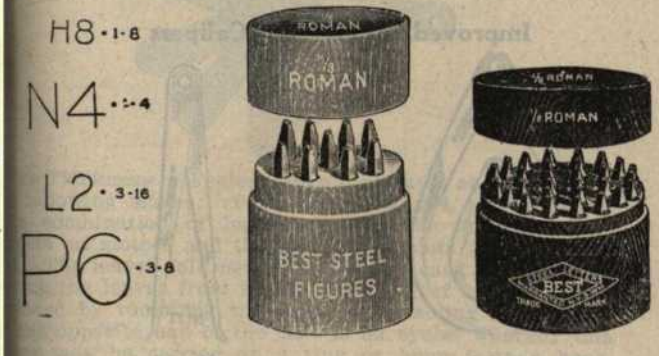
SWIVEL JAW SWIVEL BASE



No.	Jaws, ins.	Opens, ins.	Wt., lbs.	Each
403½	3½	4	43	20.00
404	4	4¾	58	24.00
404½	4½	5½	75	28.00
405	5	6½	98	35.00
406	6	9	164	60.00

Steel Letters and Figures

From Factory Only.



Above illustrations show the actual sizes and styles of figures and letters. Other sizes quoted on application.

A set of figures includes characters 1, 2, 3, 4, 5, 6, 7, 8, 0. The figure 6 is simply inverted to make the figure 9.

Set of letters consists of each letter in alphabet and a period and an & stamp.

Orders for less than sets must specify Figure or Letter desired. Furnished machine made for soft metals, wood and leather; hand made for iron, steel, etc.

Prices F. O. B. factory and not carried in stock.

Hand Made Letters and Figures

Size, inches.	1/8	3/16	1/4	3/8
Figures, per set of 9	$3.00	$ 4.00	$ 4.70	$ 6.70
Letters, per set of 28	$9.00	$12.00	$14.00	$20.00
Single Letters or Figures, each.	$0.50	$ 0.60	$ 0.70	$ 0.90

Machine Made Letters and Figures

Size, inches.	1/8	3/16	1/4	3/8
Figures, per set of 9	$2.50	$3.00	$ 4.00	$ 6.00
Letters, per set of 28	$7.50	$9.00	$12.00	$18.00
Single Letters or Figures, each.	$0.40	$0.50	$ 0.60	$ 0.90

Steel Stamps

Made from extra quality steel. Used by builders, machinists, manufacturers; in fact, all mechanics who desire a high grade steel stamping tool. These stamps are made especially to order and prices are quoted upon request. Practically any size, name or design furnished.

Prices on request.

Starrett Tools

Micrometer Calipers

For measurements by thousandths up to one inch. Has lock nut and ratchet stop.

No. 3—Micrometer Calipers.....Each, 10.00
Packed 1 in a box.

Micrometer Calipers

This Micrometer Caliper was designed to meet the demand of automobile repair men in garages, cylinder regrinding and reboring shops, that they might have an accurate tool to take measurements from 2 inches to 6 inches, inclusive, at a price comparatively much less than four individual micrometers. It will measure all ordinary sizes of pistons used. This Micrometer is well balanced and the shape of the forged frame with the holes makes it easy to handle. Each anvil has two adjusting nuts to take care of any wear, and act as a seat when held in position by the knurled nut. Suitable wrenches are furnished to make any adjustment. Decimal equivalents are stamped on the thimble and the Micrometer is provided with lock nut. They are furnished with 2, 3, 4 and 5-inch standards.

No. 224D—With ratchet stop and standards....Each, 28.25
Packed 1 in a box.

Micrometer Calipers

Similar to other Starrett Micrometers except with black enameled frame.

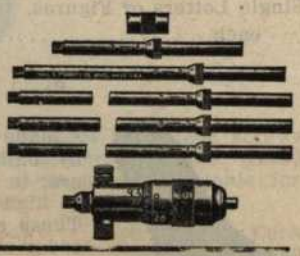
Starrett No. 436. Decimal equivalents as marked on the thimble.

	Each
1-inch size, without ratchet stop	6.25
1-inch size, with ratchet stop	6.75
2-inch size, from 1 to 2 ins., without ratchet stop	7.00
2-inch size from 1 to 2 ins., with ratchet stop	7.50
3-inch size, from 2 to 3 ins., without ratchet stop	7.75
3-inch size, from 2 to 3 ins., with ratchet stop	8.25
4-inch size, from 3 to 4 ins., without ratchet stop	8.50
4-inch size, from 3 to 4 ins., with ratchet stop	9.00
5-inch size, from 4 to 5 ins., without ratchet stop	9.25
5-inch size, from 4 to 5 ins., with ratchet stop	9.75
6-inch size, from 5 to 6 ins., without ratchet stop	10.00
6-inch size, from 5 to 6 ins., with ratchet stop	10.50

Packed 1 in a box.

Inside Micrometer Calipers

Designed for internal and linear measurements of cylinders, rings, etc. The micrometer screw in the head has ½-inch movement. Has six rods and one ½-inch gauge and measures from two inches to eight inches.



No. 124A—With case.....Each, 9.00
No. 124A—Without case.....Each, 7.25
Packed 1 in a box.

Cylinder Gauge

An ideal Gauge for determining tapered, out-of-round or scored cylinders. This Gauge is of rugged construction and has a non-breakable crystal over the dial. The dial is mounted on a block which moves at right angles to the sled. The sled has two line contact points which are at all times in alignment with the walls of the cylinder. Two contact points (hardened) which independently cause the hand to travel over the dial reading in .001 and with a unique double spring action makes the Gauge self-centering and absolutely non-collapsible. Provisions for diameters varying from 2½ inches to 6 inches are made with two adjustable rods. The dial is graduated to show plus or minus, one turn of the hand being .100. By turning the knurled rim the dial may be instantly moved to bring the 0 mark to any point desired in relation to the hand. Nickel plated. Weight 12 ounces.

No. 452.....Each, 15.00
Packed 1 in a box.

Patent Telescoping Gauges

These are instruments from which the exact size of holes or slots can be taken by an outside caliper or micrometer, so that shrink, close or loose fits, varying in thousandths, or less, can be made and measured. The ends of each telescope head are hardened and are made on a radius of the smallest hole it will enter. These instruments are more reliable than ordinary leg calipers on account of the tendency of the legs of the latter to spring and of the points to catch in blow holes or other depressions. They can be used either in fitting cylinders to holes or holes to cylinders.

No. 229B—Range ¾ in. to 1¼ ins.....Each, 2.10
No. 229C—Range 1¼ in. to 2⅛ ins.....Each, 2.40
No. 229D—Range 2⅛ in. to 3½ ins.....Each, 3.00
Packed 1 in a box.

Improved Firm-Joint Calipers

No. 26

No. 27

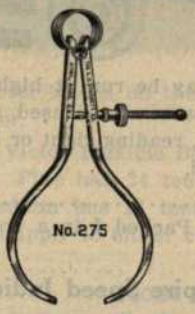
The improvement in these Calipers consists in the construction of the joint, which is so made as to be drawn together by means of a screw. The main stud is squared and fitted to one leg, thus preventing the stud from turning when loosening and tightening, and insuring a smooth and uniform friction of more or less tension to suit the user. The sizes below refer to the length of the Calipers. Their capacity is about one-third greater than the size given.

Size, inches.	4	5	6	8	10	12
No. 26.....Each,	.60	.70	.80	1.00	1.10	1.20
No. 27 .....Each,	.60	.70	.80	1.00	1.10	1.20

Packed 2 in a box.

Starrett Tools—Continued

Calipers and Dividers



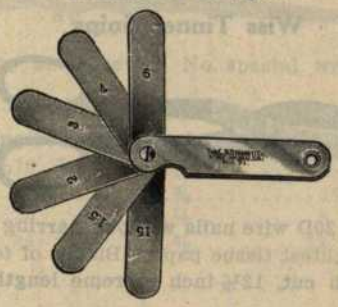
	No. 274 Inside Calipers	No. 275 Outside Calipers			No. 277 Dividers	
Size, ins.	2	3	4	5	6	
No. 274	Each, 1.20	1.50	1.80	1.80	2.10	
No. 275	Each, 1.20	1.50	1.80	1.80	2.10	
No. 277	Each, 1.20	1.50	1.80	1.80	2.10	

Packed 2 in a box.

	No. 73 Inside Calipers			No. 79 Outside Calipers			No. 83 Dividers	
Size, ins.	2½	3	4	5	6	8	10	12
No. 73	.80	.85	.90	1.00	1.05	1.20	1.65	1.80
No. 79	.80	.85	.90	1.00	1.05	1.20	1.65	1.80
No. 83	.80	.85	.90	1.00	1.05	1.35	1.65	1.80

Packed 3 in a box.

Thickness Gauges



The Thickness or Feeler Gauge illustrated above contains the following leaves: .0015, .002, .003, .004, .006 and .015. This combination of leaves permits the adjustment of tappets on motors and the gauging of slots from .0015 to .031. The leaves fold neatly in a metal case, thereby protecting the leaves from kinks, and any leaf may be easily replaced by removing the screw stud acting as a pivot. At the opposite end of the case is an eyelet whereby this gauge may be carried on a ring or hung from a hook.

No. 71 ..... Each, .90

Packed 12 in a box.

Has 9 leaves, viz.. .0015, .002, .003, .004, .006, .008, .010, .012 and .015.

The leaves are tempered and have the thickness marked upon them. Case 3⅜ inches long by ½ inch wide; leaves 3 1/16 inches long by ½ inch wide.

No. 172A ..... Each, 1.50

Packed 1 in a box.

Flexible Rules

Starrett No. 320. Very thin, spring-tempered rules, graduated on one side only in 32nds.

One-half inch wide and will easily conform to 2-inch circle.

1-inch ..... Each, .30
2-inch ..... Each, .45
3-inch ..... Each, .60
4-inch ..... Each, .75
6-inch ..... Each, .90
9-inch ..... Each, 1.35
12-inch ..... Each, 1.65

Packed 6 in a box.

Spring-Tempered Rules

Starrett No. 303. Has No. 4 graduations of 8ths, 16ths, 32ds and 64ths, and is graduated in 32ds of an inch on opposite sides of one end.

3-inch, 5/16-inch wide ..... Each, .60
6-inch, ¾-inch wide ..... Each, .90
9-inch, 7/8-inch wide ..... Each, 1.35
12-inch, 1-inch wide ..... Each, 1.65

Packed 6 in a box.

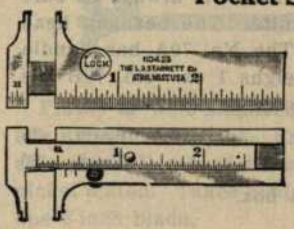
Hook Rules

Same as 6-inch No. 303 except with hook on end. Very convenient in taking measurements from points where user cannot see if rule is even with measuring edge, from round corners, through hubs of pulleys, setting inside calipers, etc. The hook may be quickly removed by turning the eccentric stud one-half turn.

No. 419 ..... Each, 1.25

Packed 3 in a box.

Pocket Slide Calipers



Starrett No. 425. Graduated in 32ds and 64ths. The improved clamping device is a valuable feature.

3-inch ..... Each, 4.00
5-inch ..... Each, 5.00

Packed 1 in a box.

Combination Squares

Starrett No. 11. The 6, 9 and 12-inch have levels (in their stocks) and center heads will be furnished unless otherwise ordered.

Blades can be furnished in No. 4 and No. 7 graduations. No. 4, which shows graduations of 8ths, 16ths, 32nds and 64ths, is most commonly used and will be furnished unless otherwise specified.

	With Center Head	Without Center Head
4-inch	Each, 2.10	1.50
6-inch	Each, 2.40	1.80
9-inch	Each, 3.00	2.40
12-inch	Each, 3.60	3.00

Packed 1 in a box.

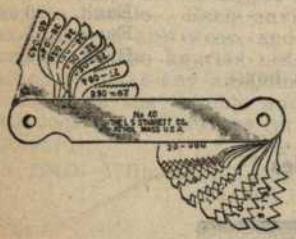
Starrett Automatic Adjustable-Stroke Center Punch

The ordinary hammer and center punch are not sufficiently accurate when laying out fine work. They require the use of both hands, and the accuracy of the blow depends upon the skill of the mechanic. The automatic center punch contains a mechanism which automatically strikes a blow of any required force when the punch is in the exact position desired by the operator. The working parts are hardened, durable and accessible for such repairs as may ever be needed. The AA size is 3¾ inches long when adjusted for medium stroke, ⅜-inch diameter and weighs 1 ounce. The A size is 5 inches long when adjusted for a medium stroke, ½-inch in diameter and weighs 3 ounces.

No. 18AA.....Each, 1.80
No. 18A .....Each, 2.40

Packed 1 in a box.

Starrett Improved Screw Pitch Gauges

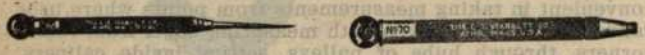


This Gauge has 22 pitches from 9 to 40. It can be used inside a nut as well as on the outside of a screw or bolt.

No. 40.....Each, 1.25

Packed 1 in a box.

Starrett Pocket Scribers

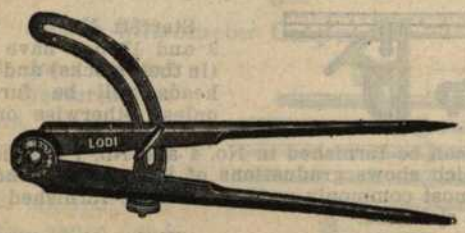


This tool is made from steel tubing, knurled and nickel plated. The scriber is made from the best quality of steel, finely tempered, and is held by a knurled chuck. The scriber is reversible, telescoping into the stock, and is held by a slight turn of the chuck so that it is always as safe to carry in the pocket as a penknife. The hexagon head prevents rolling off the bench. The No. 70A has handle ¼ in. dia., blade 2⅜ in. long; weighs 1 oz. No. 70B has handle ⅜ in. dia., blade 2⅞ in. long; weighs 1½ oz.

No. 70A.....Each, .35
No. 70B.....Each, .50

Packed 6 in a box.

Lodi Spring Dividers



Bright steel finish, made of sheet steel with hardened points and brass adjusting nut.

6-inch. . .....Per doz., $ 8.00
8-inch. . .....Per doz., $11.00

6 in., 1 doz.; 8 in., ½ doz. in a box.

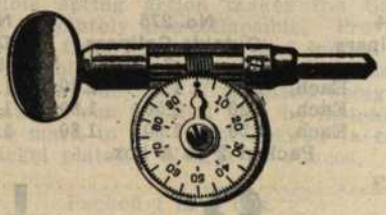
Starrett High Speed Indicators

This indicator may be run at high speed without heating. The working parts are encased, and the dial plate has two rows of figures, reading right or left, as the shaft may run. Nickel plated.

No. 104.....Each, 1.25

Packed 1 in a box.

Empire Speed Indicators



Steel cap for pointed centers. Furnished with split cap. Nickel plated.

No. 101.....Each, $1.60

Packed 1 in a box.

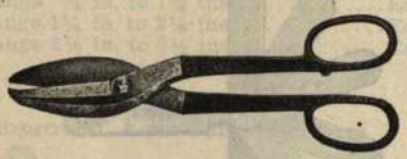
English Standard Wire Gauges

Black finish, decimal equivalents of each number are stamped on the back.

No. 188—Takes from 1 to 36.....Each, 3.00
No. 189—Takes from 6 to 36.....Each. 2.50

Packed 2 in a box.

Wiss Tinner Snips



Tested to cut 20D wire nails without marring edges. Also cut clean the lightest tissue paper. Blades of toughest drop forgings. 3-inch cut, 12½-inch extreme length.

No. 9W. . .....Each, $3.40

Packed 1 in a box.

Wiss Auto Snips

Drop-forged from best steel and has good leverage. Carefully ground and polished. 2 inch cut, 7 inch extreme length.

No. 13.....Each, $2.00

Packed 6 in a box.

Victor Flexible Hack Saw Blades

This is one of the best blades on the market. Well advertised and a big seller.

We can furnish the Victor Flexible Back Blades in both fine and medium cut. Fine has 24 teeth to the inch for hard material and medium has 18 teeth to the inch for ordinary work. Prices apply to either cut.

Length, inches	8	9	10	12
Per dozen	$0.90	$1.10	$1.20	$1.40

One dozen in a package. Six dozen in a box.

Star Flexible Hack Saw Blades

A well known blade tempered on the edge only, for cutting pipe, tubing, channels and all work where a blade is subjected to unusual liability of breakage. 18-tooth blade recommended for ordinary work. Also furnished in 24 and 32-tooth for cutting extra fine stock. Prices apply to either cut.

Length, inches	8	9	10	12
Per dozen	$1.00	$1.20	$1.30	$1.50

One dozen in a package. Six dozen in a box.

New Easy Bolt Clippers

Adjusted by set screws. No special wrench or shims needed.

No.	Length, ins.	Will Cut Bolts Thread, ins.	Wt., lbs.	Each
0	18	5/16	3	$ 6.00
1	24½	3/8	5¾	$ 8.00
2	30	½	9	$11.20
3	36	5/8	13	$14.40

"O K" Cutters

These small cutters will be found useful in every garage, shop, factory, store, farm or household. Made in two sizes.

No. 10 weighs 1½ lbs., length, 10 inches.

Capacity with Clipper Cut Jaws, 3/16-inch annealed bolts in the thread, or 1/4-inch soft rivets.

No. 14 weighs 2 lbs. 5 ozs., length, 14 inches.

Capacity with Clipper Cut Jaws, ¼-inch annealed bolts in the thread, or ¼-inch soft rivets.

No. 10 ..... Each, $4.40

No. 14 ..... Each, $4.80

No. 9 Hack Saw Frame

Frame is made of best cold rolled steel. It is light, but very strong. Depth 2¾ inches. Takes blades 8 to 12 inches. Handle of hardwood, mahogany finish, and metal parts are nickel plated. Furnished without blade.

No. 9 ..... Per doz., $8.40

Packed 1 in a box.

No. 28 Hack Saw Frame

The special composition handle is perfectly shaped to give a firm, comfortable grip, eliminating hand-cramp and insuring complete control, thereby reducing the breaking of blades to a minimum. Takes blades 8 to 12 inches. All parts are held together when the blade is not in place. Made of 3/16-inch stock, the heavy steel construction assures the user of rigidity. Depth 3¼ inches. Nickeled and buffed. Furnished without blade.

No. 28 ..... Each, $2.20

Packed 1 in a box.

No. 247 Hack Saw Frame

Frame is well balanced. Made of ¼x¾ inch steel and has extra heavy back. Rubberoid handle gives a comfortable grip. Depth of throat is 3⅛ inches. All steel parts nickel plated. Takes blades 8 to 12 inches. Furnished with one 8-inch blade.

No. 247 ..... Each, $5.50

Packed 1 in a box.

"It is an index to successful merchandising to be known as a Stowe customer."

Files and Rasps

We furnish in two grades—the genuine Nicholson grade or our private brand Stowe grade.

The Nicholson brand is well known to the trade as being one of the best grades on the market. The Stowe brand is an excellent quality file at a moderate price and guaranteed to be equal to any other American-made File.

List Prices of Files as Adopted by the File Manufacturers' Association of the United States, April 2, 1923.

Prices Shown are Per Dozen.

INCH	MILL			MILL 1 R. E.		MILL 2 R. E.		MILL BLUNT		INCH	INCH	TAPERS		SLIM TAPERS	EXTRA SLIM TAPERS	Double Extra Slim Tapers	HAND-SAW BLUNT	BANDSAW BLUNT & TAPER		PITSAW	INCH
	BAST.	2d CUT	SMOOTH	BAST.	2d CUT	BAST.	2d CUT	BAST.	2d CUT			SGL. CUT	DBL. CUT					REGULAR	SLIM		
3	3.00	.....	.....	.....	.....	.....	.....	.....	.....	3	3	2.10	.....	2.10	.....	.....	.....	.....	.....	.....	3
4	3.00	3.50	.....	.....	.....	.....	.....	.....	.....	4	3½	2.10	.....	2.10	.....	.....	.....	.....	.....	.....	3½
5	3.20	3.80	.....	.....	.....	.....	.....	.....	.....	5	4	2.20	2.90	2.20	2.20	2.20	2.60	2.90	.....	4.80	4
6	3.50	4.00	4.50	3.90	4.50	4.40	5.00	3.90	4.60	6	4½	2.40	3.10	2.30	2.30	2.30	3.00	3.10	.....	5.40	4½
7	3.90	4.60	.....	4.40	5.20	4.90	.....	4.30	4.90	7	5	2.60	3.50	2.50	2.50	2.50	3.40	3.50	.....	5.40	5
8	4.30	4.90	5.40	4.80	5.50	5.40	6.10	4.90	5.80	8	5½	3.00	.....	2.90	2.90	2.90	.....	.....	.....	6.10	5½
9	4.90	5.80	.....	5.50	6.50	6.10	.....	.....	.....	9	6	3.40	4.70	3.10	3.10	3.10	4.30	4.70	3.90	6.10	6
10	5.60	6.40	7.00	6.30	7.20	7.00	8.00	6.70	7.80	10	7	4.30	5.60	3.80	3.80	3.80	5.40	5.60	.....	7.00	7
12	7.50	8.60	9.40	8.40	9.70	9.40	10.80	.....	.....	12	8	5.40	6.70	4.50	4.50	4.50	6.60	6.70	5.30	7.50	8
14	10.70	12.20	13.10	12.00	.....	.....	.....	.....	.....	14	10	8.10	.....	6.40	.....	.....	.....	9.70	.....	.....	10
16	14.70	16.80	17.90	.....	.....	.....	.....	.....	.....	16	12	12.50	.....	9.50	.....	.....	.....	.....	.....	.....	12
18	20.20	.....	.....	.....	.....	.....	.....	.....	.....	18		.....	.....	.....	.....	.....	.....	.....	.....	.....	

INCH	FLAT			HAND			SQUARE			INCH	INCH	THREE SQUARE			HALF ROUND			ROUND			INCH
	BAST.	2d CUT	SMOOTH	BAST.	2d CUT	SMOOTH	BAST.	2d CUT	SMOOTH			BAST.	2d CUT	SMOOTH	BAST.	2d CUT	SMOOTH	BAST.	2d CUT	SMOOTH	
4	3.70	4.30	4.70	3.70	4.30	4.80	3.80	4.60	4.90	4	4	4.80	5.60	6.10	4.80	5.60	6.10	3.00	3.50	3.90	4
5	3.90	4.60	4.90	3.90	4.70	5.30	4.10	4.80	5.30	5	5	5.40	6.10	6.40	5.40	6.10	6.40	3.20	3.80	4.10	5
6	4.30	4.80	5.30	4.30	5.10	5.60	4.60	5.10	5.50	6	6	6.10	6.70	7.10	6.10	6.70	7.10	3.50	4.00	4.50	6
7	4.80	5.50	6.10	4.90	5.80	6.30	5.10	5.80	6.30	7	7	7.00	7.70	8.20	7.00	7.70	8.20	3.90	4.60	4.90	7
8	5.30	6.10	6.60	5.40	6.30	6.70	5.50	6.30	7.00	8	8	7.50	8.30	8.90	7.50	8.30	8.90	4.30	4.90	5.40	8
9	6.30	7.20	7.90	6.70	7.80	8.30	.....	.....	.....	9	9	.....	.....	.....	.....	.....	.....	4.90	5.80	6 30	9
10	7.00	8.10	8.70	7.50	8.70	9.40	7.40	8.50	9.10	10	10	9.10	10.10	10.70	9.10	10.10	10.70	5.60	6.40	7.00	10
12	9.70	11.00	12.10	10.70	12.30	13.50	10.20	11.50	12.80	12	12	11.80	13.00	13.90	11.80	13.00	13.90	7.50	8.60	9.40	12
14	13.30	15.30	16.70	15.00	17.00	18.20	13.90	16.10	17.50	14	14	15.50	17.00	18.30	15.50	17.00	18.30	10.70	12.20	13.10	14
16	17.80	20.10	22.30	20.10	22.80	24.20	18.70	21.20	23.30	16	16	20.60	22.50	24.20	20.60	22.50	24.20	14.70	16.80	17.90	16
18	23.90	26.80	29.20	26.80	29.90	31.50	25.10	28.20	30.40	18	18	27.50	29.90	32.00	27.50	29.90	32.00	20.20	22.70	24.30	18
20	31.50	.....	.....	35.10	.....	.....	32.80	.....	.....	20	20	.....	.....	.....	.....	.....	.....	27.40	.....	.....	20

INCH	WARDING			KNIFE			INCH	INCH	PILLAR			SQUARE BLUNT	ROUND BLUNT	LEAD FLOAT and WOOD FILES		INCH	INCH	HANDSAW BLUNT SLIM	DOUBLE ENDER	CANT SAW	INCH
	BAST.	2d CUT	SMOOTH	BAST.	2d CUT	SMOOTH			BAST.	2d CUT	SMOOTH	BAST.	BAST.	Flat	Hlf. Rd.						
4	4.00	4.80	5.40	5.40	6.10	6.40	4	6	4.30	5.10	5.60	.....	.....	4.60	7.00	6	4	2.50	.....	.....	4
5	4.50	5.30	5.80	6.10	6.70	7.10	5	8	5.40	6.30	6.70	7.40	5.60	6.30	8.50	8	5	3.10	.....	4.70	5
6	4.90	5.90	6.40	6.90	7.50	7.90	6	10	7.50	8.70	9.40	10.20	7.50	8.60	10.70	10	6	3.80	.....	5.40	6
8	6.40	7.50	8.20	8.50	9.10	9.50	8	12	10.70	12.30	13.50	13.90	10.70	11.80	14.10	12	7	.....	3.50	6.10	7
10	8.70	10.10	11.00	10.10	11.50	12.30	10	14	15.00	.....	.....	18.70	14.70	16.00	18.50	14	8	5.40	3.90	6.40	8
12	.....	.....	.....	13.70	15.20	16.10	12	16	20.10	.....	.....	25.10	.....	21.50	24.70	16	9	.....	4.40	.....	9
								18	.....	.....	.....	32.80	.....	.....	.....	18	10	.....	4.90	8.70	10
																	12	.....	6.00	11.40	12

INCH	CABINET FILES	CABINET RASPS		HALF RD. WOOD RASPS		FLAT WOOD RASPS		HAND FINISHING		INCH	INCH	SHOE RASPS		PLANER KNIFE	CROSS CUT	SPECIAL CROSS CUT	INCH
		2d CUT	SMOOTH	BAST.	SMOOTH	BAST.	SMOOTH	2d CUT	SMOOTH			FLAT	HF. RD.				
6	8.10	10.10	11.70	8.10	10.10	.....	.....	.....	.....	6	6				6.10	3.90	6
8	10.10	12.80	15.50	10.10	13.70	9.40	12.80	.....	.....	8	7				.....	4.30	7
10	13.70	17.50	20.70	13.70	18.70	12.80	17.50	.....	.....	10	8	10.10	10.10	6.40	7.50	4.90	8
12	18.70	22.80	26.80	18.70	24.80	17.50	23.20	15.20	16.20	12	9	12.20	12.20	.....	8.50	.....	9
14	24.80	29.60	33.90	24.80	32.90	23.20	30.80	20.60	21.70	14	10	13.70	13.70	8.60	9.10	6.70	10
16	.....	.....	.....	32.90	43.60	30.80	40.90	.....	.....	16	12	.....	.....	.....	11.80	.....	12

INCH	HORSE RASPS PLAIN			HORSE RASPS, TANGED			INCH	INCH	THE FOLLOWING ARE SPECIAL FILES MADE AND CARRIED IN STOCK IN *NICHOLSON* BRAND ONLY		INCH
	½ FILE	SLIM	½ FILE	REGULAR	SLIM	THIN					
12	12.80	.....	.....	16.80	.....	1.531″x .270″ 16.00	12	12	Flat Aluminum Files...No. 75	11.80	12
13	.....	.....	.....	19.60	.....	1.594″x .275″ 18.20	13	14	Flat Aluminum Files...No. 76	16.00	14
14	17.80	.....	.....	23.10	13″ stock 21.90	1.750″x .280″ 21.90	14	12	Hand Brass Files..... No. 162	15.00	12
15	20.90	.....	.....	27.30	13″ stock 25.20	1.812″x .285″ 25.20	15	12	Flat Armory Cut Files .No 204	13.30	12
16	24.40	14″ Stk.	21.50	32.20	14″ stock 29.70	1.875″x .290″ 29.70	16	10	Last Makers Cabinet Rasps, Bastard	19.50	10
18	32.90	15″ Stk.	25.90	.....	.....	.....	18	10	Last Makers Cabinet Rasps, 2d Cut	24.00	10
20	.....	16″ Stk.	32.90	.....	.....	.....	20	10	Pattern Makers Cabinet Rasps, Bastard	20.60	10
								10	Pattern Makers Cabinet Rasps, 2d Cut	25.20	10

THE ABOVE LIST COMPRISES ALL OF THE KINDS, SIZES AND CUTS OF FILES THAT WILL BE REGULARLY CARRIED IN STOCK. ANYTHING DIFFERING FROM THESE FILES WILL BE CONSIDERED AS SPECIAL AND WILL NOT BE MANUFACTURED EXCEPT IN CASE OF URGENT NECESSITY AND WHEN MANUFACTURED PRICE WILL BE BASED STRICTLY UPON COST OF MATERIAL AND COST OF MANUFACTURE AT TIME GOODS ARE MADE.

The above list comprises all of the kinds, sizes and cuts of Files that will be regularly carried in stock by the manufacturers. Anything differing from these Files will be considered as special and will not be manufactured except in case of urgent necessity and when manufactured the price will be based strictly upon cost of material and cost of manufacture at time goods are made.

Files

All sizes regularly carried in both Nicholson and Stowe grades except where otherwise noted. We also carry 6, 8, 10, 12 and 14-inch Mill Bastard Files in Royal Grade for those wanting a lower priced file. File measurements are based on cutting length and not over all.

Mill Bastard Files

Inches	4	5	6	8	10	12	14	16
Per dozen	3.00	3.20	3.50	4.30	5.60	7.50	10.70	14.70

4 to 10 inch, 1 doz.; larger, ½ doz. in a box.

Flat Bastard Files

Inches	4	5	6	8	10	12	14	16
Per dozen	3.70	3.90	4.30	5.30	7.00	9.70	13.30	17.80

4 to 10 inch, 1 doz.; larger, ½ doz. in a box.

Half-Round Bastard Files

Inches	4	5	6	8	10	12	14
Per dozen	4.80	5.40	6.10	7.50	9.10	11.80	15.50

4 to 10 inch, 1 doz.; larger, ½ doz. in a box.

Round Bastard Files

Inches	4	5	6	7	8	9	10	12	14	16
Diameter, inches	⅛	7/64	3/32	¼	5/32	11/64	3/8	½	5/8	¾
Per dozen	3.00	3.20	3.50	3.90	4.30	4.90	5.60	7.50	10.70	14.70

4 to 10 inch, 1 doz.; larger, ½ doz. in a box.

Square Bastard Files

Inches	4	5	6	8	10	12	14	16
Diameter, inches	⅛	11/64	3/32	5/32	3/8	½	5/8	¾
Per dozen	3.80	4.10	4.60	5.50	7.40	10.20	13.90	18.70

4 to 10 inch, 1 doz.; larger, ½ doz. in a box.

Slim Taper Files

Inches	3	3½	4	4½	5	5½	6	7	8	10	12
Per dozen	2.10	2.10	2.20	2.30	2.50	2.90	3.10	3.80	4.50	6.40	9.50

1 doz. in a box.

Extra Slim Taper Files

Inches	4	4½	5	5½	6	7
Per dozen	2.20	2.30	2.50	2.90	3.10	3.80

1 doz. in a box.

Regular Taper Files

Inches	3	3½	4	4½	5	5½	6	7	8
Per dozen	2.10	2.10	2.20	2.40	2.60	3.00	3.40	4.30	5.40

1 doz. in a box.

Double Ender Taper Files

Nicholson Grade only.

Inches	7	8	9	10
Per dozen	3.50	3.90	4.40	4.90

1 doz. in a box.

Files—Continued

File measurements are based on cutting length and not over all.

Cross Cut Saw Files

Nicholson Grade only.

Inches	8	10
Per dozen	7.50	9.10

1 doz. in a box.

Cant Saw Files

Nicholson Grade only.

Inches	6	8	10
Per dozen	5.40	6.40	8.70

1 doz. in a box.

Weed's Special File and Handle

Slim Blunt

This handle has a solid metal ferrule with taper socket, into which the taper shank of the file fits, perfectly rigid yet easily adjusted or loosened. One handle included to every three files.

Length, ins.	4	4½	5	5½	6
Thickness, ins.	3/32	7/64	7/64	7/64	1/8
Per dozen	2.20	2.30	2.50	2.90	3.10

One dozen files and one-third dozen handles in a box.

Nicholson Flat Wood Rasps

Length, ins.	12	14	16
Per dozen	17.50	23.20	30.80

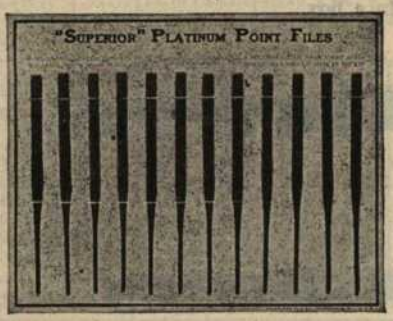
½ dozen in a box.

Nicholson Half Round Wood Rasps

Length, ins.	10	12	14	16
Per dozen	13.70	18.70	24.80	32.90

½ dozen in a box.

Coil Files



Specially designed for cleaning and brightening contact points on Spark Plugs, Coils and Vibrators. Furnished in two grades, Tungsten for use with hard tungsten contact points and Platinum for softer metals. Packed 1 dozen in a box or 1 dozen mounted on display card.

Tungsten Coil Files in boxes. . . . . Per doz., $1.80
Tungsten Coil Files on cards. . . . . Per doz., $2.00
Platinum Coil Files in boxes. . . . . Per doz., $1.60
Platinum Coil Files on cards. . . . . Per doz., $1.90

File Cards

Used for cleaning files, also good for roughing tubes or casings for repairs. Plain Handle, Fabric Backing, brush part 3¾x1½ ins. Length over all 8½ ins.

No. 0. . . . . Per dozen, $5.00

Horse Rasps

Mico Plain Pattern

Mico Rasps have been on the market for years and have stood the test. Guaranteed to give satisfaction.

Lgth., Ins.	Width, Ins.	Pattern	Per Doz.
14	1⅝	Regular	17.80
16	1 13/16	Regular	24.40
18	1 11/16	Slim	25.90

½ dozen in a box.

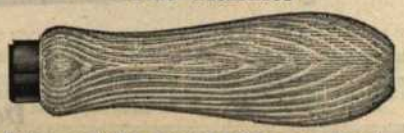
Heller's Plain Pattern

A high quality rasp and well known among the trade.

Lgth., Ins.	Width, Ins.	Pattern	Per Doz.
14	1⅝	Regular	17.80
16	1¾	Regular	24.40
18	1 11/16	Slim	25.90

½ dozen in a box.

File Handles



Designed to meet the demand for a moderate price handle, yet very substantial. Heavy polished seamless steel ferrule.

	Length	Diameter	
No. 75	4¼ in.	1⅛ in.	Per doz., $0.70
No. 74	4½ in.	1¼ in.	Per doz., $0.90
No. 73	4¾ in.	1⅜ in.	Per doz., $1.00

Hand Cold Chisels

Extra Quality Grade, Regular Length.

Guaranteed to be made of the best quality American Tool Steel. For use in hardest places. Points and ends highly polished.

	Size, Ins.	Weight, Per Doz.	
No. 14	⅜x5½	1½ lbs	Per doz., $ 3.90
No. 15	½x6	3 lbs	Per doz., $ 5.00
No. 16	⅝x6½	4 lbs	Per doz., $ 6.00
No. 17	¾x7	7 lbs	Per doz., $ 8.80
No. 61	⅞x8	12 lbs	Per doz., $13.20
No. 63	1x8	14 lbs	Per doz., $17.60

Packed 6 in a box.

Extra Quality Grade, Extra Long

	Size, Ins.	Weight, Per Doz.	
No. 18	⅜x 8	3 lbs	Per doz., $ 5.30
No. 19	½x 9	5 lbs	Per doz., $ 6.70
No. 22	½x12	7 lbs	Per doz., $12.00
No. 20	⅝x10	7 lbs	Per doz., $10.00
No. 23	⅝x12	8 lbs	Per doz., $14.00
No. 21	¾x10	10 lbs	Per doz., $16.80

Packed 6 in a box.

Agricultural Grade

Made of special octagon shape and are warranted to give satisfaction for general purpose work.

	Size, Ins.	Weight, Per Doz.	
No. 31	½x6	3 lbs	Per doz., $ 3.50
No. 32	⅝x6½	4 lbs	Per doz., $ 4.30
No. 33	¾x7	7 lbs	Per doz., $ 6.70
No. 34	⅞x8	12 lbs	Per doz., $10.00

Packed 6 in a box.

Sharpen Ezy Cold Chisels

Can be sharpened and ground down the same as an ordinary carpenter's chisel. The fluted handle makes a comfortable grip. Light, strong and practical. Invaluable for automobile kit.

	Size, Ins.	Weight, Per Doz.	
No. 41	⅜x6	1¼ lbs	Per doz., $3.00
No. 42	½x6¼	2½ lbs	Per doz., $3.70
No. 43	⅝x6¾	3½ lbs	Per doz., $5.70
No. 44	¾x7	6 lbs	Per doz., $7.60

⅜, ½ and ⅝ packed 12 in a box.
¾ packed 6 in a box.

Boiler Maker's Hand Beading Tool

Drop Forged. Octagon Shaped Handle. Weight, 8 lbs. per dozen.

No. 2576—¾-in. dia., 8 inches long ..... Per doz., $12.00

Packed 6 in a box.

Octagon Cape Chisels

Forged from Extra Warranted Octagon Steel.

	Size, ins.	Length, ins.	Edge, ins.	Weight, Per doz.	Per doz.
No. 150A	½	6¼	¼	4	$ 5.60
No. 150B	½	6¼	5/16	4	$ 6.70
No. 150C	⅝	7	⅜	6½	$ 8.80
No. 150D	¾	8	½	8	$12.00
No. 150E	⅞	8	⅝	16	$18.50
No. 150F	1	8	¾	18½	$23.50

Packed 12 in a box.

Key Lifting Chisels

Made of the very best grade of tool steel. Blued Finish.

	Size, ins.	Length, ins.	Edge, ins.	Weight, Per doz.	Per doz.
No. 135	½	6	5/16	3½ lbs	$12.00
No. 136	⅝	6½	⅜	6 lbs	$15.60

No. 135, 12; No. 136, 6, in a box.

Key Seating Chisels

	Size, ins.	Length, ins.	Edge, ins.	Weight, Per doz.	Per doz.
No. 143	½	6	5/16	2 lbs	$12.00
No. 144	⅝	6½	⅜	2¾ lbs	$15.60

Packed 12 in a box.

Diamond Point Chisels

Forged from Extra Warranted Octagon Steel.

	Size, ins.	Length, ins.	Size Point, ins.	Weight, Per doz.	Per doz.
No. 55A	⅜	5¼	¼	2 lbs	$ 5.60
No. 55B	½	5¼	5/16	3½ lbs	$ 6.70
No. 55C	⅝	6	⅜	6 lbs	$ 8.80
No. 55D	¾	6	½	8½ lbs	$12.00

Packed 12 in a box.

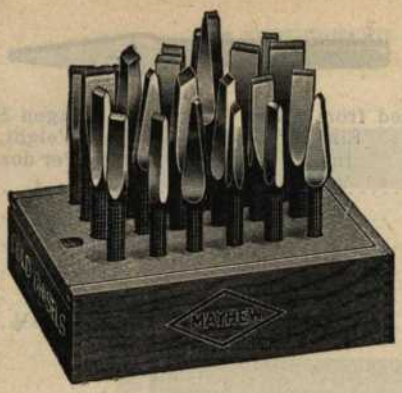
Star Drills

For Expansion Bolts.

Made of solid forged steel, oil tempered. For stone drilling. Furnished either in 12-inch or 18-inch lengths.

No.	Dia., ins.	For Expansion Shields, ins.	18-inch Per doz.	12-inch Per doz.
7	⅜	¼	$10.80	$ 8.00
8	½	5/16	$12.00	$ 9.60
10	⅝	⅜	$15.00	$11.40
12	¾	½	$18.00	$13.20
14	⅞	⅝	$19.80	$15.20

No. 030 Chisel Assortment

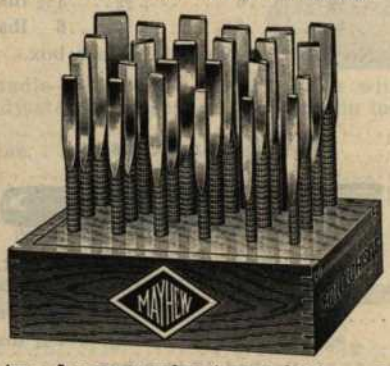


Contains two dozen Chisels, patent embossed hand hold, as follows:

16 regular Taper Chisels, ¼ to ¾-inch points; 6 Cape Chisels, ⅛ to 5/16-inch points; 2 Diamond Point Chisels, ¼ to 5/16-inch points. Packed in substantial dealer's display case. Weight 6 lbs.

No. 030—Assortment.....Each, **$13.00**

No. 038 Chisel Assortment



Contains two dozen regular taper, high-grade, embossed handhold Chisels as follows:

Three ¼", four 5/16", five ⅜", six ½", five ⅝" and one ¾". Packed in substantial dealer's display case. Weight 6 lbs.

No. 038—Assortment.....Each, **$12.00**

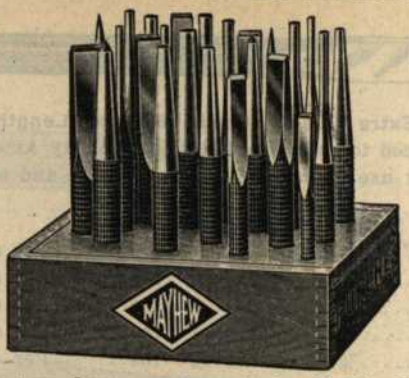
No. 449 Chisel and Punch Assortment

Contains one dozen regular taper chisels and one dozen pin punches.

It consists of 3 each ½ and ¾ in. chisels, 6 ⅝ in. chisels, 1 each 5/16 and ⅛ in. punch, 4 each 5/16 and ¼ in. punch, and 2 ¾ in. punches. Packed in substantial dealer's display case. Weight 6¼ lbs.

No. 449—Assortment.....Each, **$9.00**

No. 339 Combination Chisel and Punch Assortment



Contains two dozen embossed handhold Chisels and Punches. Consists of 5 solid Punches, ⅛ to ¼ inches; 2 Center Punches, 3/32 and ½ inches; 2 Prick Punches, 3/32 and ½ inches; 8 Pin Punches, ⅛ to ¼ inches, and 7 Hand Cold Chisels, ¼ to ⅝ inches, assorted lengths and points. Packed in substantial dealer's display case. Weight 6¼ lbs.

No. 339—Assortment.....Each, **$9.50**

No. 490 Punch Assortment

This assortment contains two dozen embossed hand-forged, electric tempered punches. It consists of 8 solid, 4 center, 2 prick and 10 pin punches of ½-inch and 3/32-inch bodies and assorted lengths.

Packed in substantial dealers' display case. Weight 5½ lbs.

No. 490—Assortment.....Each, **$7.90**

No. 412 Pin Punch Assortment

This assortment contains four Pin Punches, one each 1/16, ⅛, 5/16 and ¼-inch points. Three smallest sizes have ⅜-inch octagon body and large size has ½-inch octagon body. Each punch is 6 inches long. Each set of four punches put up in a separate box. Weight 1 lb.

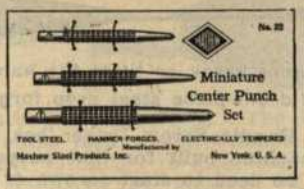
No. 412—Assortment.....Each, **$1.10**

No. 596 Extra Long Pin Punch Assortment

A set of four punches in a box, one each 6/32, 8/32, 10/32, and 12/32 points. Made of ½ inch special steel, 9 inches long. Weight 1½ lbs.

No. 596—Assortment.....Per set, **$2.30**

No. 22 Center Punch Set

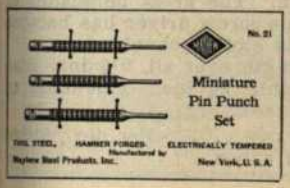


This set consists of: Three Center Punches with $\frac{3}{32}$-inch, ¼-inch and $\frac{5}{16}$-inch body, and 2¼-inch, 2¾-inch and 4-inch long.

Packed on neat card as illustrated, 12 cards in a box. Weight per doz. cards, 1½ lbs.

No. 22—Set of 3 Punches.....Per set, $0.60

No. 21 Pin Punch Set



This set consists of: Three Pin Punches with $\frac{5}{16}$-inch body, 2/32, $\frac{5}{64}$ and $\frac{3}{32}$-inch points, and 2¼, 2⅜ and 2½-inch long.

Packed on neat card as illustrated. 12 cards in a box. Weight per doz. cards, 1 lb.

No. 21—Set of 3 Punches.....Per set, $0.60

No. 25 Punch Set

This set consists of—
Five Pin Punches, 3-4-5 and 6/32 in.
Two Drive Punches.
One Prick Punch.
Three sizes of Center Punches.
Full length of all tools, 4 inches.
Complete in canvas roll.
6 sets packed in a box.
Weight per set, 1 lb.

No. 25—Set of 10 Punches.....Per set, $3.20

No. 26 Punch Set

This set consists of—

One Center Punch, ⅜x6-in.

Four Pin Punches, $\frac{5}{16}$-in., ¼-in., and ⅜-in.

Above Pin Punches are 6 inches in length.

Complete in canvas roll.

6 sets paced in a box.

Weight per set, 1 lb.

No. 36—Set of 5

Punches. . . . . .Per set, $2.80

Machine Punches

Extra Quality Grade, Regular Lengths

Made of very best grade American tool steel. Polished points and heads. Points are assorted and small enough for general work.

No.	Size, ins.		Weight Per doz.	Per doz.
4	⅜x7½	3/32 and 4/32 points	3 lbs	$4.00
5	½x6	4/32 and 5/32 points	3½ lbs	$3.80
6	⅝x7	6/32 and 7/32 points	5¾ lbs	$6.00

Packed 6 in a box, assorted points.

Extra Quality Grade, Extra Long

No.	Size, ins.		Weight Per doz.	Per doz.
8	½x10	4/32 and 5/32 points	5½ lbs	$6.90
9	⅝x10	6/32 and 7/32 points	9½ lbs	$7.50

Packed 6 in a box, assorted points.

Agricultural Grade

Made with assorted points and very good for use around all kinds of machinery.

No.	Size, ins.		Weight Per doz.	Per doz.
1	½x6	4/32 and 5/32 points	3¾ lbs	$2.70
2	⅝x7	6/32 and 7/32 points	4½ lbs	$3.60

Packed 6 in a box, assorted points.

Stowe Special Machine Punch

Made of ½-inch special octagon tool steel with a point especially designed for punching out Guard and Section Rivets. Polished head and point. Properly tempered. This is a very high grade tool. $\frac{5}{32}$-in. point.

No. 24—½x6 in. Weight per doz., 3¼ lbs...Per doz., $4.30
Packed 6 in a box.

Lining Up Taper Punches

Almost an indispensable tool in setting up machinery for lining up holes to rivet or bolt.

No. 197—⅝x8½ in., 5-in. taper, $\frac{7}{16}$-in. point.
Weight per doz., 6¾ lbs.....Per doz., $ 9.80
No. 198—¾x10 in., 6-in. taper, $\frac{1}{2}$-in. point.
Weight per doz., 10½ lbs.....Per doz., $12.60
Packed 6 in a box.

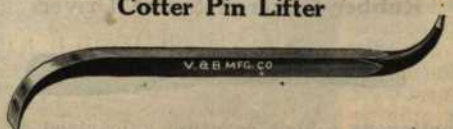
Center Punches

This Punch is hand-forged and electric-tempered. Has embossed hand hold and the points are ground to correct angle for hard usage.

Made in two sizes, $\frac{13}{32}$x6 in. body with $\frac{3}{32}$ to $\frac{7}{32}$-in. points and ½x6-in. body with 8/32 to 12/32-in. points. Each box contains an assortment of all sizes.

No. 491—Weight per doz., 2½ lbs.....Per doz., $4.50
Packed 12 in a box, assorted points.

Cotter Pin Lifter



One end for pulling cotter pins, the other for spreading. Drop forged, oil tempered. Length over all 6 inches; size of steel $\frac{5}{16}$ inch.

No. 6—Weight per doz., 2 lbs.....Each, $0.30
Packed 6 in a box.

No. 94 Matchless Mechanics' Screw Drivers

Blade runs clear through the handle

Blades are forged from a fine grade of special steel, carefully hardened and tempered. Blades and ferrules are nicely polished and a flush rivet secures them both to one handle. Handles are given a rubberoid finish, which does not crack or chip, and provides a smooth surface, which is easy to grasp and does not slip in the hand.

Blade, ins.	Per dozen
2	$ 4.90
3	$ 5.80
4	$ 5.90
6	$ 8.00
8	$11.00
10	$13.80
12	$16.20

½ dozen in a box.

No. 36 Challenge Electricians' Screw Drivers

All sizes have $\frac{3}{16}$-inch steel blade, polished steel ferrule and red fluted handle. Blade, ferrule and handle are fastened together by flush rivet.

Blade, ins.	Per dozen
2½	$3.90
3½	$4.20
4½	$4.40
5½	$4.60
6½	$5.20
8½	$6.60

½ dozen in a box.

Navy Screw Drivers

Round forged blade, hardened, tempered and polished. Heavy long steel ferrule with reinforced collar. Fluted hardwood handle, stained red and varnished. Blade securely riveted to prevent turning.

Blade, ins.	Per dozen
4	$ 3.60
6	$ 4.60
8	$ 6.20
10	$ 8.30
12	$11.50

½ dozen in a box.

Rubber Covered Screw Drivers

One continuous rubber covering vulcanized all the way round, meeting flush the small exposed portion of the blade.

3-inch Blade.....Per doz., $ 9.60
6-inch Blade.....Per doz., $14.40

½ dozen in a box.

Knife Handle Screw Drivers

Cannot break or twist the handle.
Solid one-piece steel drop forging.

Every Knife Handle Screw Driver has its point tested in a special machine built for that purpose. The Hammer Head can be used to start screws or to loosen rusty screws.

Blade, ins.	Per dozen
3	$4.20
4	$4.70
6	$6.60
8	$8.80

½ dozen in a box.

Knife Handle Machinists' Screw Driver

Has square shank for wrench. The great persuader of large and stubborn screws. This screw driver has become very popular with automobilists and mechanics.

Length of blade, 4½ ins. Length over all, 9½ ins. Size of square, $\frac{7}{32}$ in. Width of points, ½ ins. Thickness of point, $\frac{5}{64}$ in.

No. 610.....Per doz., $10.80

½ dozen in a box.

Perfect Handle Winged Screw Drivers

Solid one-piece steel drop forging.

Especially recommended for use with greasy or sweaty hands—for much greater leverage. Can be used with a wrench when necessary.

Blade, ins.	Per dozen
3	4.00
4	4.25
5	5.00
6	6.00
7	7.00
8	8.00
10	10.00
12	12.00

½ dozen in a box.

Big Bully Screw Driver

Especially suitable for automobile work. Made of $\frac{1}{4}$ inch octagon tool steel, and can be used for a lever or prying tool. Will stand a very heavy strain without bending. Blade extends clear through hardwood handle, and a heavy steel pin rivets ferrule, handle and blade together. Length blade, 8 inches.

No. 300.....Per doz., $5.30

½ dozen in a box.

Screw Driver Bits

Made with bits ¼, $\frac{5}{16}$, ⅜-inch wide. Length over all, 4½ inches.

No. 1—Assorted.....Per dozen, $4.20

1 dozen assorted in a box.

No. 530 "Pug" Screw Drivers

Made for work in close places. The blade of spring steel, five-sixteenths inch round, extends through handle and is inseparably attached to steel cap. Maple handle, ebony finish, steel ferrule, nickled. Riveted through ferrule and blade. One size, 1¾ inch blade, 5½ inches over all, weight per dozen 3½ lbs.

No. 530.....Per doz., $6.00

½ dozen in a box.

Crescent Hamr-Handl Screw Driver

A very handy tool, serving as a light hammer or very powerful screw driver. The blade is made of high grade tool steel, hardened and oil tempered. The handle is turned from a solid bar of steel with one end hardened to use as a hammer. The handle is held in either position by a strong spring and plunger in the handle. Very finely nickel plated all over. Packed three in a box. On orders calling for three of each size, a total of only nine screw drivers, we will furnish without charge the counter display illustrated above, on which three of the tools will be mounted.

No. K24—4-inch blade.....Per doz., $12.00
No. K25—5-inch blade.....Per doz., $13.10
No. K26—6-inch blade.....Per doz., $14.00
No. DB4—Assortment of 3 each 4, 5 and 6-inch sizes and counter display board.....Each, $ 9.80

Han-D Hammer Screw Driver

A very ingenious and practical tool, comprising an all-metal hammer and three screw drivers fitted into the hollow handle. Length over all is 7½ inches, weight 10 oz. Very nicely nickel plated. An attractive display card furnished to dealers on orders for 10 or more tools.

Han-D Hammer Screw Drivers.....Each, $1.80

1 in a box.

4-in-1 Screw Driver Set

This clever little tool combines four sizes of screw drivers in one and has long been in demand on account of its usefulness. All blades are made of the very best grade of tempered carbon steel, highly polished and nickel plated finish. 5½ ins. from tip of blade to cap.

No. 401.....Each, $0.90

15 sets in a display box.

Little Wonder Screw Drivers

One Dozen.

This assortment consists of:
Four each, size 1¼, 2 and 3-inch blades.
Length over all, 3, 3¾ and 4¾ inches.
This is a fine little tool, made exactly like other high-grade screw drivers, except for size. Suitable for mechanics.

Very useful for all light work on clocks, telephones, locks, electric fixtures, typewriters, cabinet hardware, etc.

Red stained handles, long steel ferrule. Tempered steel blades, ⅛-inch in diameter. Will not turn in handle. Weight, 8 ozs. Put up on attractive counter display stand.

No. 42—Assortment.....Each, $1.60

Reliance Screw Driver Assortment

One Dozen.

These Reliance Screw Drivers are strictly high-grade. Blades are of special steel; handle is hardwood, fluted design; heavy drawn steel ferrule, all securely riveted together. Blade is finely polished, ferrule nickel plated and handle has rubberoid finish. In an attractive metal display rack, fitted with rubber feet to prevent scratching the counter.

Each assortment consists of four each 4, 5 and 6-inch Reliance Screw Drivers and one Display Rack, all nicely wrapped and each complete assortment in a cardboard box. Weight, 4¼ lbs.

No. 35—Assortment.....Each, $5.70

Matchless Screw Driver Assortment

One Dozen.

A very attractive display of high grade Screw Drivers.

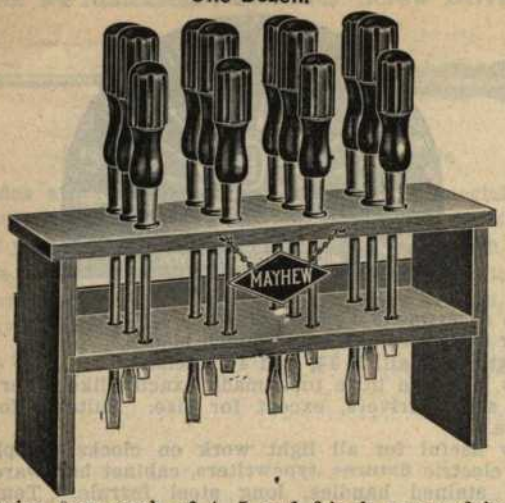
Assortment consists of the following No. 94 Matchless Screw Drivers: Two 3-in., four 4-in., two 5-in., four 6-in.

Stand is made of welded steel enameled in three colors, equipped with rubber feet to avoid scratching showcase or counter. Weight, 6 lbs.

No. 40—Assortment..Each $7.50

Mayhew Screw Driver Assortment

One Dozen.



Contains four each of 4, 5 and 6-inch screw drivers in attractive display rack, all nicely wrapped and packed complete in a substantial fibre carton. Blade is made of high grade steel and handle of hardwood. Weight, 4¾ lbs.

No. 509—Assortment.....Each, $5.40

No. 12 "Yankee" Ratchet Screw Drivers

Especially adapted for gunsmiths, fitters, electricians and mechanics requiring a strong, substantial screw driver with a short stub blade.

Adjustable for right or left hand or rigid.

Made in one size only. Blade is ⅛-inch diameter, 1⅛ inches long, entire length, 5¾ inches.

No. 12. . . ..Per doz., $15.20

½ dozen in a box.

No. 10 "Yankee" Ratchet Screw Drivers

Adjustable for right or left hand, or rigid.

Length of blade, ins.	Per doz.
4. . .	$14.00
6. . .	$17.40
8. . .	$19.60
10. . .	$23.70
12. . .	$26.00

½ dozen in a box.

No. 15 "Yankee" Ratchet Screw Drivers

Similar to No. 10 except has a knurled washer to turn the blade with thumb and forefinger in starting a screw.

Length of blade, ins.	Per doz.
4. . .	$12.80
6. . .	$14.00

½ dozen in a box.

No. 110 "Yankee" Ratchet Screw Drivers

Same as No. 10, except screw holder attachment is included.

Length of blade, ins.	Per doz.
4. . .	$19.30
6. . .	$23.00
8. . .	$25.30

½ dozen in a box.

Perpetuo Screw Driver Assortment

Two Dozen.

Sectional view of handle.

The screw drivers in this assortment are strictly quality tools. The blades are made of selected, tough, tool steel and extend clear through the handle. The handle is permanently fastened to the blade by a double ferrule and cannot come loose. The special shape corrugations provide a splendid hand grip.

This assortment contains four 3-inch, six 4-inch, eight 5-inch and six 6-inch, or a total of two dozen, put up in a very attractive display rack, all nicely wrapped and packed complete in a substantial fibre carton. Weight, 10¾ lbs.

No. 701—Assortment.....Each, $18.00

No. 30A "Yankee" Spiral-Ratchet Screw Driver

Right and Left Hand, and Rigid.

This is the standard size. It drives or draws screws by pushing on handle, or by ratchet movement of handle, and can be made rigid as an ordinary screw driver by an ingenious locking device when closed. Three bits of different widths are included with each tool. The extreme length of tool with bit in chuck is 13 inches when closed and 18¼ inches when extended.

No. 30A.....Doz., $48.90

One in a box.

No. 31A "Yankee" Spiral-Ratchet Screw Driver

This tool is of same design as No. 30A, but is made considerably heavier and stronger throughout, for use in car shops, etc., where heavy screws are required to be driven or drawn. Three bits of different widths are included with each tool. The extreme length of tool with bit in chuck is 16¾ inches when closed, and 25 inches when extended.

No. 31A.....Doz., $65.70

One in a box.

No. 130A "Yankee" Spiral-Ratchet Screw Driver

Quick Return.

This is same as No. 30A, with spring in handle, causing handle to automatically come back for the next push. Can be worked with one hand and in inaccessible places.

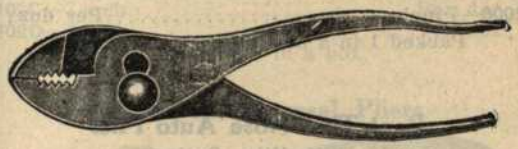
No. 130A.....Doz., $55.70

One in a box.

Combination Slip Pliers

Drop Forged. Nickel Plated.

No. 31—5-inch. . . . . Per doz., $6.56
No. 36—6-inch. . . . . Per doz., $6.56
Packed 1 in a box.



Similar to No. 36 except black finish. A good plier.

No. 30B—6-inch. . . . . Per doz., $3.50
Packed 1 in a box.

Drop Forged. Round Nose. Nickel Plated.

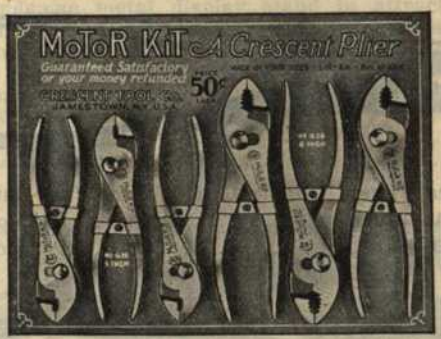
No. 38—8-inch. . . . . Per doz., $9.36
No. 34—10-inch. . . . . Per doz., $13.10
Packed 1 in a box.

B-B Side-Cutting Pliers

This is a strictly high-grade tool. Every pair is warranted. Especially adapted for automobile use. Drop forged and oil tempered. Nickel plated.

No. 104—6-inch. . . . . Per doz., $10.80
Packed 1 in a box.

No. DB8 Assortment Crescent Pliers



Consists of 6 each Nos. 31—5-inch and 36—6-inch Crescent Motor Kit Pliers, 3 of each mounted on a very attractive counter display stand and 3 of each in individual boxes, all packed in a carton. Display card measures 8½x11 inches, and is equipped with a lock easel back. The assortment is furnished at the regular price of the pliers, with no charge for the display card.

No. DB8—Assortment. . . . . Each, $6.56

Cee-Tee-Co Combination Slip Pliers

Drop Forged, Hardened and Oil Tempered.

Accurately machined and teeth are milled. Checker dot handles insure good grip. Nickel finish.

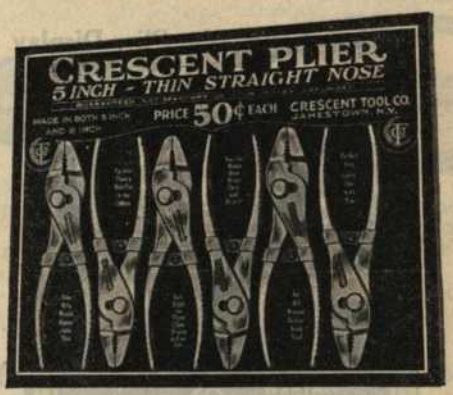
No. 101A— 5-inch. . . . . Per doz., $4.40
No. 101B— 6-inch. . . . . Per doz., $4.40
No. 101C— 8-inch. . . . . Per doz., $6.60
No. 101D—10-inch. . . . . Per doz., $9.80
Packed 1 in a box.

Thin Straight Nose Slip Pliers

The thin straight nose of this plier makes it very convenient for narrow places, but is equally adapted for all-around work. Drop forged, hardened and oil tempered. Hand polished and nickel plated, checker dot handles.

No. L25—5-inch. . . . . Per doz., $7.50
No. L26—6-inch. . . . . Per doz., $7.50
Packed 1 in a box.

No. DB7 Crescent Plier Assortment



Consists of one-half dozen each Nos. L25 5-inch and L26 6-inch Thin Straight Nose Pliers. The 5-inch are mounted on a strong cardboard display stand and the 6-inch are in regular cartons; all packed in shipping carton.

No. DB7. . . . . Each, $7.50

Universal Slip Pliers

The peculiar shape of inside of jaws of this plier gives a greater parallel grasping surface than with ordinary shaped plier jaws.

It has broad-faced handles, which make them easy to grasp.

Made of the best and toughest plier steel, drop forged, properly tempered and warranted. Nickel plated.

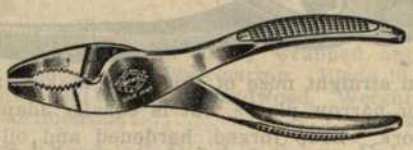
No. 473—7-inch. . . . . Per doz., $9.40
Packed 1 in a box.

Mayhew Solid-Joint Patented Pliers

A strong and durable plier, only two pieces of metal used in its construction. A nipple connection forms an integral part of one of the forgings and locked to the other replaces the usual rivet and nut, making it practically indestructible. The Solid-Joint feature resulting in permanent close fit makes this plier an efficient wire cutter. Length of jaw and flat nose permits its use in very close quarters. Nickel finish.

No. 51A—5-inch. . . . . Per doz., **$ 8.00**
No. 51B—6-inch. . . . . Per doz., **$ 9.60**
No. 51C—8-inch. . . . . Per doz., **$12.00**

Packed 1 in a box, 12 in carton with display.



Same as No. 51 except with thin nose. Nickel finish.

No. 52A—5-inch. . . . . Per doz., **$8.00**
No. 52B—6-inch. . . . . Per doz., **$9.60**

Packed 1 in a box, 12 in carton with display.

Mayhew Solid-Joint Plier Display

NO.51 REGULAR MODEL DISPLAY
NO.52 THIN NOSE " "

The above illustrates the display which is furnished without charge with each order for one dozen either No. 51 or 52, 5 or 6 in. Plier. These Pliers come packed in individual boxes, one dozen boxes in a carton, one Plier being mounted on this display.

Radio Plier

Designed primarily for Radio work. 5½-inch long thin nose, solid joint, side cutting, knurled handle. Bolted, not riveted. Nickel plated.

No. 90367. . . . . Per doz., **$20.00**

Packed 1 in a box, 6 boxes in a carton.

Thin Nose Auto Plier

With Wire Cutter

A plier combining the practical features and the utility of the long nose plier with those of the slip joint patterns. Nose measures 1⅞ inches in length, tapers to $\frac{3}{32}$ inch in thickness at the point. Especially adapted to automobile and electrical repair work. Knurled handles, nickel plated.

No. 2000—7-inch. . . . . Per doz., **$15.80**

Packed 1 in a box, 6 boxes in a carton.

Bent Thin Nose Auto Plier

With Wire Cutter

One of the most practical bent nose pliers. Jaws 2 inches long, $\frac{3}{16}$ inch thick, bent at angle of 33 degrees, milled with a V above the teeth to grab small nuts. Is especially handy for battery work, etc. Handles are knurled. Nickel plated.

No. 2020—7-inch. . . . . Per doz., **$16.80**

Packed 1 in a box, 6 boxes in a carton.

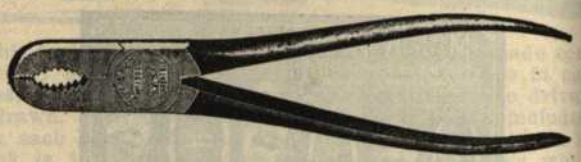
Utica Button's Pattern Pliers

A Utica finish Button Plier. Polished head. Has four wire cutters.

No. 1000A— 6-inch. . . . . Per doz., **$14.35**
No. 1000B— 8-inch. . . . . Per doz., **$17.25**
No. 1000C—10-inch. . . . . Per doz., **$22.90**

Packed 1 in a box, 6 boxes in a carton.

Utica Gas and Burner Pliers



Utica Finish. Single Grip. With Wire Cutter.

No. 1300A—5-inch . . . . . Per doz., **$14.00**
No. 1300B—6-inch . . . . . Per doz., **$16.20**

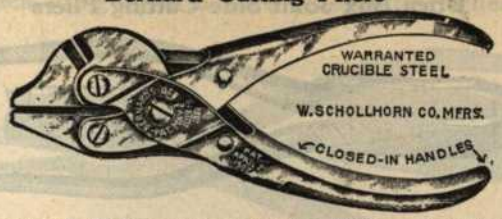
Packed 1 in a box, 6 boxes in a carton.

Utica Finish. Double Grip. With Wire Cutter.

No. 1300H— 7-inch . . . . . Per doz., **$18.45**
No. 1300K— 8-inch . . . . . Per doz., **$20.65**
No. 1300L—10-inch . . . . . Per doz., **$23.60**

Packed 1 in a box, 6 boxes in a carton.

Bernard Cutting Pliers

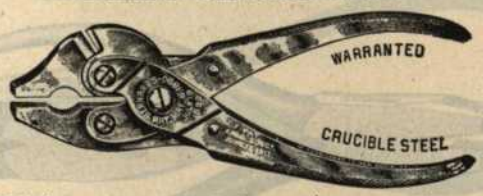


A standard high-powered cutting Plier. Parallel jaws, compound leverage, open throat, full nickel plated.

No. 102A—5-inch. . . . . Per doz., $31.50
No. 102B—6-inch. . . . . Per doz., $37.20
No. 102C—7-inch. . . . . Per doz., $49.00
No. 102D—8-inch. . . . . Per doz., $58.00

Packed 6 in a box.

Bernard Universal Pliers



Parallel jaws, compound leverage, open throat. Full nickel-plated.

No. 128A—5-inch. . . . . Per doz., $31.50
No. 128B—6-inch. . . . . Per doz., $37.50
No. 128C—7-inch. . . . . Per doz., $49.50

Packed 6 in a box.

Bernard Plier Display

A handsome metal display stand in attractive colors together with counter display cards. Folded and packed complete in fibre carton with literature and other "dealer helps." Weight each 10½ lbs. Consists of 1 each of the following:

No. 102—Size, inches, 4½, 5½, 6½, 8.
No. 128—Size, inches, 5, 6, 7.

No. 1—Assortment complete. $23.30

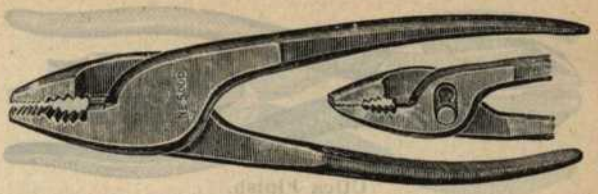
Utica Box Joint Slip Joint Side Cutting Pliers

This tool has many advantages over the ordinary Slip Joint Plier. The jaws, where all the work is done, are supported equally on both sides of the plier, there being no one-sided twist or strain on the rivet or bolt when gripping or cutting. Utica finish.

No. 6000A—7-inch. . . . . Per doz., $22.80
No. 6000B—9-inch. . . . . Per doz., $25.20

Packed 1 in a box, 6 boxes in a carton.

Utica Slip Joint Combination Pliers

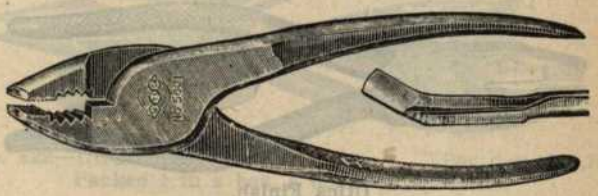


Designed primarily for the automobile mechanic. The nose is long and narrow, rivet flush on both sides. Utica finish.

No. 5000A—6-inch. . . . . Per doz., $11.75
No. 5000B—8-inch. . . . . Per doz., $14.00

Packed 1 in a box, 6 boxes in a carton.

Utica Bent Nose Combination Slip Joint Pliers

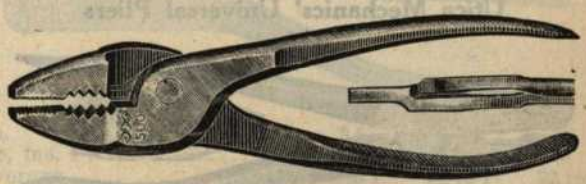


A bent nose combination plier to work in out of the way places. Utica finish.

No. 5001A—6-inch. . . . . Per doz., $16.45
No. 5001B—8-inch. . . . . Per doz., $20.65

Packed 1 in a box, 6 boxes in a carton.

Utica Thin Nose Combination Slip Joint Plier

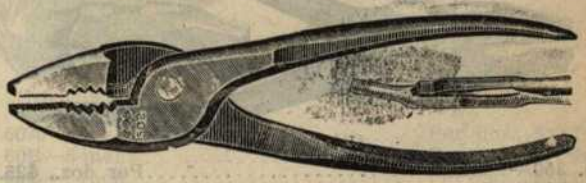


This plier enables one to reach in deep and narrow places. Flush head bolt. Can be laid flat on the work, and be used in much closer places than regular bolt and nut type. Utica finish.

No. 500—6½-inch. . . . . Per doz., $18.20

Packed 1 in a box, 6 boxes in a carton.

Utica Thin Bent Nose Combination Slip Joint Plier

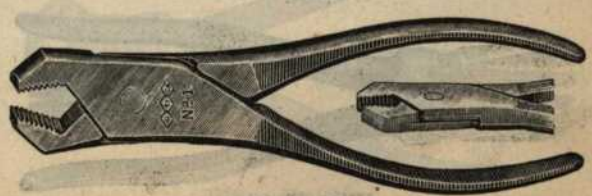


Same as No. 500, but with curved nose for automobile work. Utica finish.

No. 502—6½-inch. . . . . Per doz., $14.75

Packed 1 in a box, 6 boxes in a carton.

Utica Battery Plier



An ideal tool for the battery service station and garage. Jaws will take all types of connections. Utica finish.

No. 1—7-inch. . . . . Per doz., $21.00

Packed 1 in a box, 6 boxes in a carton.

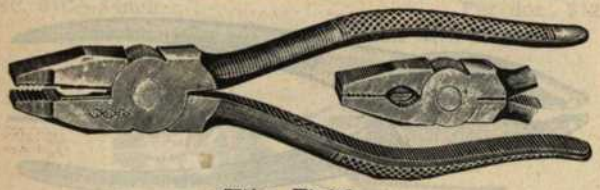
Utica Lineman's Heavy Side-Cutting Pliers

Utica Finish.

No. 1950A—6-inch. . . . . Per doz., $28.60
No. 1950B—7-inch. . . . . Per doz., $34.90
No. 1950C—8-inch. . . . . Per doz., $39.80
No. 1950D—9-inch. . . . . Per doz., $53.05

Packed 1 in a box, 6 boxes in a carton.

Utica Standard Side-Cutting Pliers



Utica Finish.

No. 50A—4-inch. . . . . Per doz., $17.65
No. 50B—5-inch. . . . . Per doz., $19.55
No. 50C—6-inch. . . . . Per doz., $20.20
No. 50D—7-inch. . . . . Per doz., $23.45
No. 50E—8-inch. . . . . Per doz., $25.50

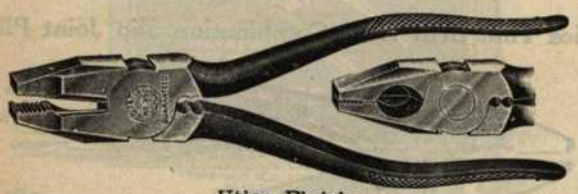
Packed 1 in a box, 6 boxes in a carton.

Utica Mechanics' Universal Pliers

No. 700—Utica Finish, 7-inch. . . . . Per doz., $26.25

Packed 1 in a box, 6 boxes in a carton.

Utica Standard Side-Cutting and Splicing Pliers



Utica Finish.

No. 350A—6-inch. . . . . Per doz., $25.40
No. 350B—7-inch. . . . . Per doz., $28.35
No. 350C—8-inch. . . . . Per doz., $30.55

Packed 1 in a box, 6 boxes in a carton.

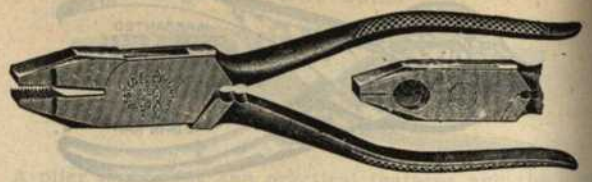
Utica Lineman's Heavy Side-Cutting and Splicing Pliers

Utica Finish.

No. 3050A—6-inch. . . . . Per doz., $35.95
No. 3050B—7-inch. . . . . Per doz., $42.30
No. 3050C—8-inch. . . . . Per doz., $42.95

Packed 1 in a box, 6 boxes in a carton.

Utica Box Joint Side-Cutting Pliers

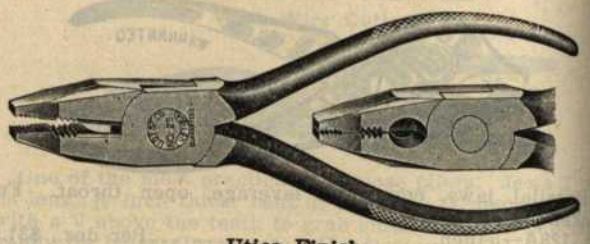


Utica Finish.

No. 2050A—5-inch. . . . . Per doz., $32.45
No. 2050B—6-inch. . . . . Per doz., $34.65
No. 2050C—7-inch. . . . . Per doz., $41.25
No. 2050D—8-inch. . . . . Per doz., $47.90

Packed 1 in a box, 6 boxes in a carton.

Utica Combination-Burner Pliers

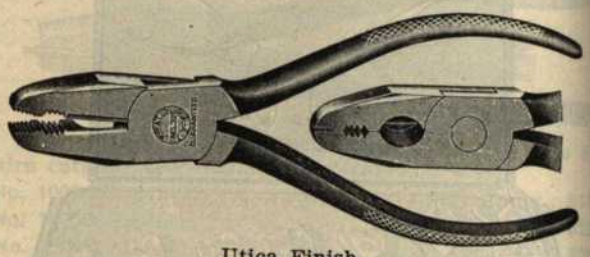


Utica Finish.

No. 25A—5 -inch. . . . . Per doz., $19.90
No. 25B—5½-inch. . . . . Per doz., $22.95

Packed 1 in a box, 6 boxes in a carton.

Utica Flat-Nose Round End Combination-Burner Pliers

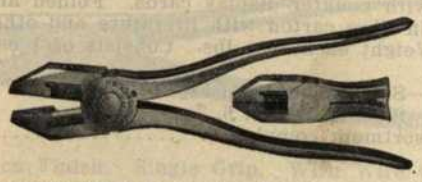


Utica Finish.

No. 325A—5 -inch. . . . . Per doz., $19.95
No. 325B—5½-inch. . . . . Per doz., $23.05

Packed 1 in a box, 6 boxes in a carton.

Neverslip Renewable Jaw Side Cutting Pliers



The Neverslip Plier is made of high-grade drop-forged steel with jaws of best crucible tool steel properly hardened and tempered. If the jaws become broken and damaged they may be replaced by merely taking out two screws. A very strong, attractive plier, full polished throughout.

No. 180B—8-inch. . . . . Per doz., $51.00

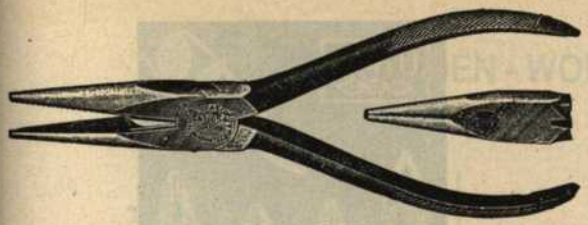
Packed 1 in a box, 6 boxes in a carton.

Extra Jaws for Neverslip Pliers

No. 180E—Extra Jaws for No. 180 Pliers. . . . Per pair, $1.00

Each pair put up in a paper box complete with screws.

Utica Long Needle-Nose Side-Cutting Pliers

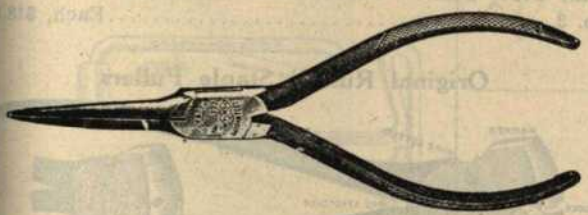


No. 655—Utica Finish, 5½-inch.....Per doz., $22.50
Packed 1 in a box, 6 boxes in a carton.

Utica Long Needle-Nose Pliers

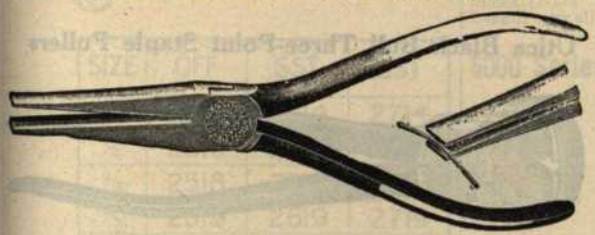
No. 1033—Utica Finish, 5½-inch.....Per doz., $19.00
Packed 1 in a box, 6 boxes in a carton.

Utica Long Needle-Nose Pliers



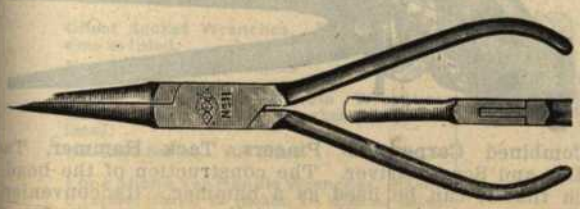
No. 777—Utica Finish, 5½-inch.....Per doz., $23.90
Packed 1 in a box, 6 boxes in a carton.

Utica Concave and Convex Weaver Nose Pliers



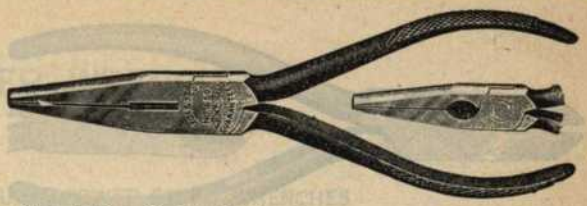
No. 23—Utica Finish, 5½-inch. . .....Per doz., $25.75
Packed 1 in a box, 6 boxes in a carton.

Utica Box Joint Flat Jaw Weaver Plier With Scored Jaw



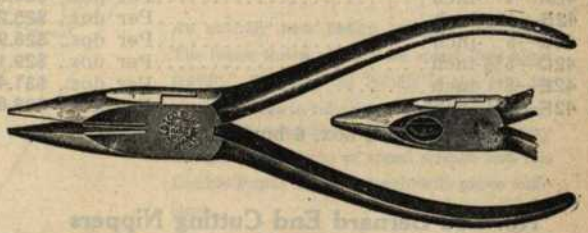
For Jewelers, Opticians, Radiator Repairmen, etc. Made of high quality spring-tempered steel.
No. 11—Utica Finish, 5½-inch.....Per doz., $22.00
Packed 1 in a box, 6 boxes in a carton.

Utica Long-Reach Flat-Nose Side-Cutting Pliers



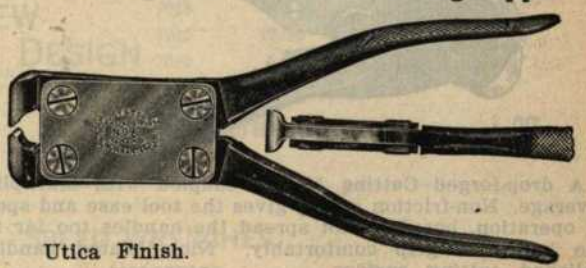
No. 650—Utica finish, 5½-inch.....Per doz., $22.90
Packed 1 in a box, 6 boxes in a carton.

Utica Machinists' Short Chain-Nose Pliers



No. 622—Utica finish, 5-inch.....Per doz., $19.75
Packed 1 in a box, 6 boxes in a carton.

Utica Compound Lever End-Cutting Nipper

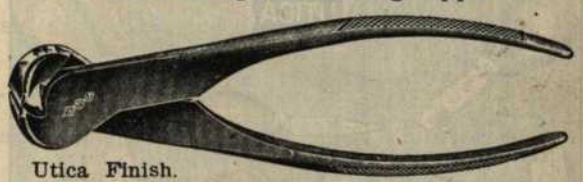


Utica Finish.

No.	3A	3B	3C
Size, ins.	5½	7½	9
Leverage	20 to 1	21 to 1	22 to 1
Size cut, ins.	⅜	½	¾
Cuts wire up to, ins.	⅛	⅛	¼
Per doz.	$36.00	$43.20	$52.45

Packed 1 in a box, 6 boxes in a carton.

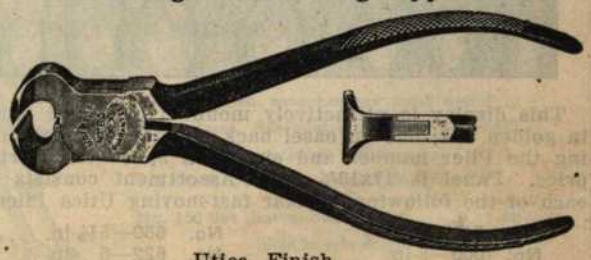
Utica Bulldog End Cutting Nipper



Utica Finish.

No. 60A—5-inch. . .....Per doz., $17.25
No. 60B—6-inch. . .....Per doz., $18.20
No. 60C—7-inch. . .....Per doz., $22.55
No. 60D—8-inch. . .....Per doz., $26.45
Packed 1 in a box, 6 boxes in a carton.

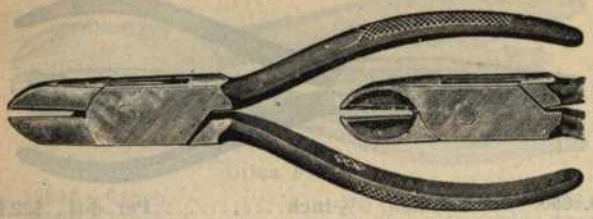
Utica Light End-Cutting Nipper



Utica Finish.

No. 65A—4 -inch. . .....Per doz., $21.35
No. 65B—4½-inch. . .....Per doz., $22.00
No. 65C—5 -inch. . .....Per doz., $22.85
Packed 1 in a box, 6 boxes in a carton.

Utica Diagonal Cutting Plier

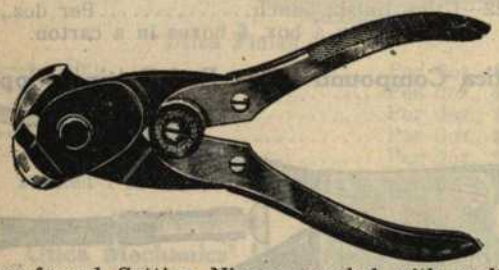


Utica Finish.

No. 42A—4 -inch . . . . . Per doz., $24.00
No. 42B—4½-inch . . . . . Per doz., $25.20
No. 42C—5 -inch . . . . . Per doz., $26.95
No. 42D—5½-inch . . . . . Per doz., $29.15
No. 42E—6 -inch . . . . . Per doz., $31.40
No. 42F—6½-inch . . . . . Per doz., $33.60

Packed 1 in a box, 6 boxes in a carton.

No. 165 Bernard End Cutting Nippers



A drop-forged Cutting Nipper coupled with multiplied leverage. Non-friction spring gives the tool ease and speed of operation, but does not spread the handles too far for the hands to grip comfortably. Nickel-plated handles, polished cutting surface.

No. 165—6-inch. . . . . Per doz., $31.50

Packed ½ dozen in a box.

No. 1 Utica Display Board

This display is attractively mounted on board finished in golden oak, has an easel back and tags to match, giving the Plier number and size with space to insert the price. Panel is 17x13¼ ins. Assortment consists of 1 each of the following popular fast-moving Utica Pliers:

No. 700—7-in.
No. 1000—8-in.
No. 50—7-in.
No. 3050—7-in.
No. 325—5½-in.
No. 1909—10-in.
No. 650—5½-in.
No. 622—5 -in.
No. 655—5½-in.
No. 1033—5½-in.
No. 777—5½-in.
No. 42—5½-in.

No. 1. . . . . Each, $22.85

No. 3 Utica Display Board

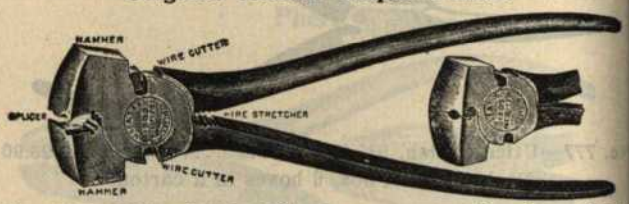
This display is attractively mounted on board finished in mahogany, has an easel back and tags to match, giving the plier number and size with space to insert the price. Panel is 8¼x11¾ ins. Assortment consists of 1 each of the following mounted on display board:

No. 5000—5-in.
No. 5000—6-in.
No. 5000—8-in.
No. 6000—7-in.
No. 500—6½-in.

In addition to above there is also included 1 each Nos. 5000—8-in.; 5000—6½-in.; 6000—7-in.; 2 each Nos. 5000—6-in.; 5000—5-in.

No. 3. . . . . Each, $18.25

Original Russell Staple Pullers



No. 1909—Utica finish, 10-inch. . . . . Per doz., $28.00

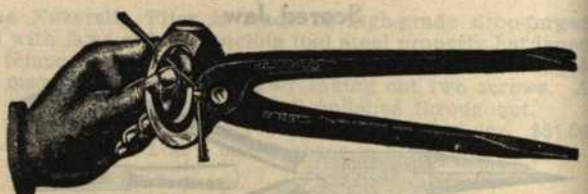
Packed 1 in a box, 6 boxes in a carton.

Utica Black Bull Three-Point Staple Pullers

No. 1900—Utica Finish, 10-inch. . . . . Per doz., $28.00

Packed 1 in a box, 6 boxes in a carton.

Carpenters' Pincers



Combined Carpenters' Pincers, Tack Hammer, Tack Puller and Screw Driver. The construction of the head is such that it can be used as a hammer. Its convenience and compact shape will especially commend it for the household.

No. 601A— 8-inch . . . . . Per doz., $12.00
No. 601B—10-inch . . . . . Per doz., $14.40

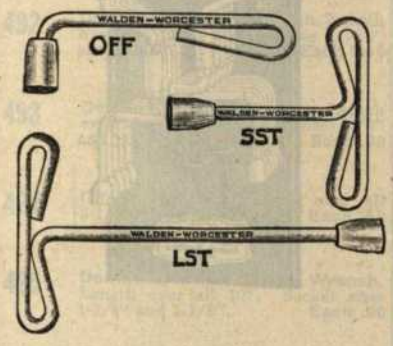
Packed 6 in a box.

WALDEN-WORCESTER WRENCHES

UNIVERSAL JOINT TEE HANDLE WRENCHES

1016-1/2"	Each 2.50
1018-9/16"	Each 2.50
1020-5/8"	Each 2.50
1022-11/16"	Each 2.50
1024-3/4"	Each 2.50
1028-7/8"	Each 2.50

TEE AND OFFSET HANDLE SOCKET WRENCHES



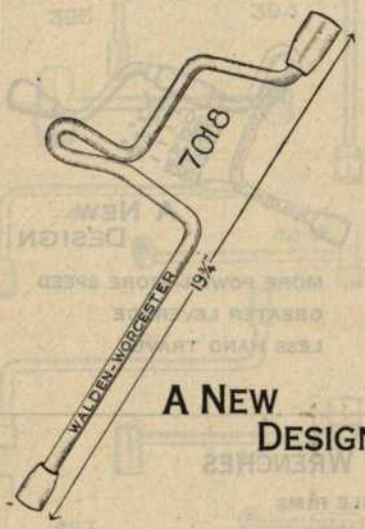
SIZE	OFF	SST	LST
7/16	2514	2614	2714
1/2	2516	2616	2716
9/16	2518	2618	2718
19/32	2519	2619	2719
5/8	2520	2620	2720
11/16	2522	2622	2722
3/4	2524	2624	2724
25/32	2525	2625	2725
13/16	2526	2626	2726
7/8	2528	2628	2728

Offset Socket Wrenches. Handles 7", 10 sizes as listed.
No. 2500 Series. All Sizes **Each .55**

Short Shank Tee Handle Wrenches. Handle 6 inches, Shank 6 inches, 10 sizes as listed.
No. 2600 Series. All Sizes **Each .60**

Long Shank Tee Handle Wrenches. Handle 6 inches, Shank 12 inches, 10 sizes as listed.
No. 2700 Series. All Sizes **Each .65**

DOUBLE-POWER SPEED WRENCHES



A NEW DESIGN

More Power—More Speed

Less Hand Travel—More Leverage

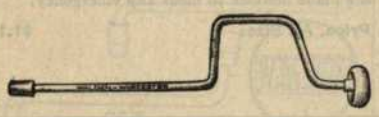
An entirely new design in speed wrenches. The lesser throw gives more speed (less hand travel). The loop on handle is the grip for extra leverage in releasing and final tightening. An offset wrench is many times necessary using ordinary type of speed wrench but this Double-Power Speed wrench will prove sufficient.

No.	Size	No.	Size
7014	7/16"	7022	11/16"
7016	1/2"	7024	3/4"
7018	9/16"	7025	25/32"
7019	19/32"	7026	13/16"
7020	5/8"	7028	7/8"

7000 Series ALL SIZES EACH **1.00**

SPEED WRENCHES

6000 SERIES



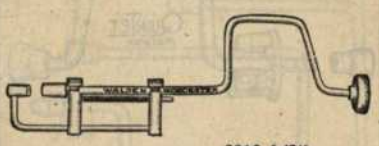
Shank 11-1/4".
Length over all 19-1/4".

Are used as speed tools in assembling and dismantling cars. Are most efficient when used on a series of the same sized nuts as on cylinder heads. These tools are big time savers.

No.	Size	No.	Size
6014	7/16"	6022	11/16"
6016	1/2"	6024	3/4"
6018	9/16"	6025	25/32"
6019	19/32"	6026	13/16"
6020	5/8"	6028	7/8"

6000 Series ALL SIZES EACH **.95**

NUT AND BOLT SPEED WRENCHES



A one man tool. The extension socket holds either the nut or bolt head while the operator spins it off. Extension arm is adjustable for different bolt lengths.

6316-1/2" Each 3.00
6318-9/16" Each 3.00

STEEL OPEN END WRENCHES

Thin stamped wrenches are most useful in many places. Special steel used to give strength and wearing qualities. Sizes are 1" x 7/8, 3/4 x 5/8, 1/2 x 9/16, 3/8 x 7/16, 1/4 x 5/16.

No. 100 Set (5 wrenches) **1.50**
(Sold in sets only)

WALDEN-WORCESTER WRENCHES

BRACE SOCKET WRENCHES FOR DEMOUNTABLE RIMS AND DISC WHEELS

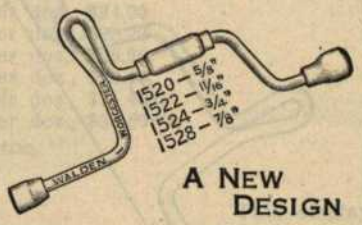
1500 SERIES

The loop on the handle is the grip for extra leverage in releasing and final tightening. The lesser throw on the brace gives more speed on account of lesser hand travel. It combines advantages of our offset and speed wrenches. The shank on this wrench is five inches long providing extra clearance for use on practically all disc wheels.

A desirable wrench for other uses than tires and wheels in garage service.

Stock No.	Size	Stock No.	Size
1520	5/8	1522	11/16
1524	3/4	1528	7/8

Each, All Sizes **$1.10**



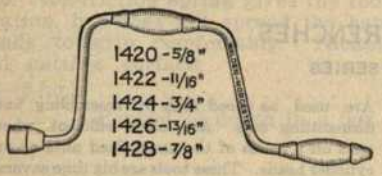
A NEW DESIGN

MORE POWER—MORE SPEED
GREATER LEVERAGE
LESS HAND TRAVEL

BRACE SOCKET WRENCHES

DEMOUNTABLE RIMS

1400 Series



Tire and Rim Wrenches are subject to abusive treatment many times, but our 1923 models are made heavier to meet any emergency.

Price, All Sizes **$1.10**

TIRE AND RIM WRENCH

A new wrench for Tire and Rim Service. A very substantial brace made of 5/8" wire 12" sweep. On shank of brace is a holder for five interchangeable sockets which are held by ball friction so that sockets may not drop off. Sockets include all standard sizes. Any socket may be replaced from regular stock (our Nos. 220, 222, 224, 226, 228). The longer shank on brace provides ample clearance for all standard tires and rims. Tire Service and garages will value this very complete tool. Change of sizes quickly accomplished.

No. 1451 **Each $3.50**

DOUBLE END SPARK PLUG WRENCHES

Pressed Steel. Case-hardened—two sizes in one. 1/64" over size of spark plug, which prevents stretching and gives better outside clearance where plugs set in port plugs or deep in block.

No. 2931 7/8"-15/16"
No. 2933 7/8"-1"
No. 2937 7/8"-1 1/8"
No. 3137 15/16"-1 1/8"

All Sizes, Each $0.45

NO. 20 DISPLAY AND STOCK SET

A new silent salesman carrying five each of four sizes of an *entirely new design* of Brace Socket Wrenches.

The boards are all metal, handsomely lithographed and will hang on the wall or post—they take up little space, 3 ft. 9" x 1 ft.

A big producer for the dealer—equally profitable for the tire service station.

5—1520	1.10	$5.50
5—1522	1.10	5.50
5—1524	1.10	5.50
5—1528	1.10	5.50

20 wrenches with display board, complete **$22.00**

Board and Hooks	12 lbs.
Wrenches, Net Weight	42 lbs.
Boxed for Shipment	65 lbs.

WALDEN-WORCESTER GENERAL SERVICE WRENCHES

391 **Double End Offset Wrench.** Length over all 8". Socket sizes 5/8" and 1/2". **Each .80**

392 **Double End Offset Wrench.** Length over all 9-1/4". Socket sizes 7/8" and 13/16". **Each 1.10**

393 **Quadruple Socket Offset Wrench.** Length over all 10-1/2". Socket sizes 15/16", 1-1/16", 25/32", 3/4". **Each 1.80**

394 **L Type Wrench 8" x 8".** Socket sizes 3/4" and 7/8". **Each .85**

395 **L Type Wrench 4" x 4".** Socket sizes 1/2" and 9/16". **Each .70**

443 **L Type Wrench 9-1/2" x 4-1/2".** Socket sizes 5/8" and 1/2". **Each .80**

444 **Triple Socket Offset Wrench.** Length over all 9". Socket sizes 1/2", 9/16" and 5/8". **Each .85**

491 **Double End Offset Wrench.** Length over all 10-1/2". Socket sizes 9/16" and 3/4". **Each .80**

492 **Double End Offset Wrench.** Length over all 10". Socket sizes 11/16" and 15/16". **Each 1.10**

493 **Double End Offset Wrench.** Length over all 8-1/4". Socket sizes 5/8" and 11/16" **Each .80**

494 **Offset Wrench.** Length over all 5-1/8". Socket size 1/2". **Each .50**

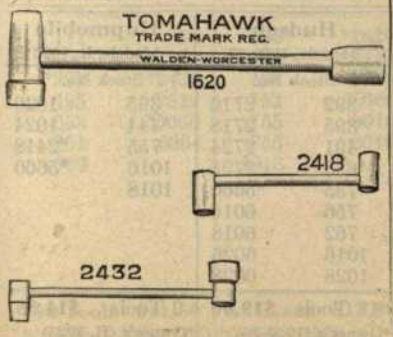
495 **Double End Box Type Wrench.** Length over all 10". Socket sizes 1-1/4" and 1-1/8". **Each .90**

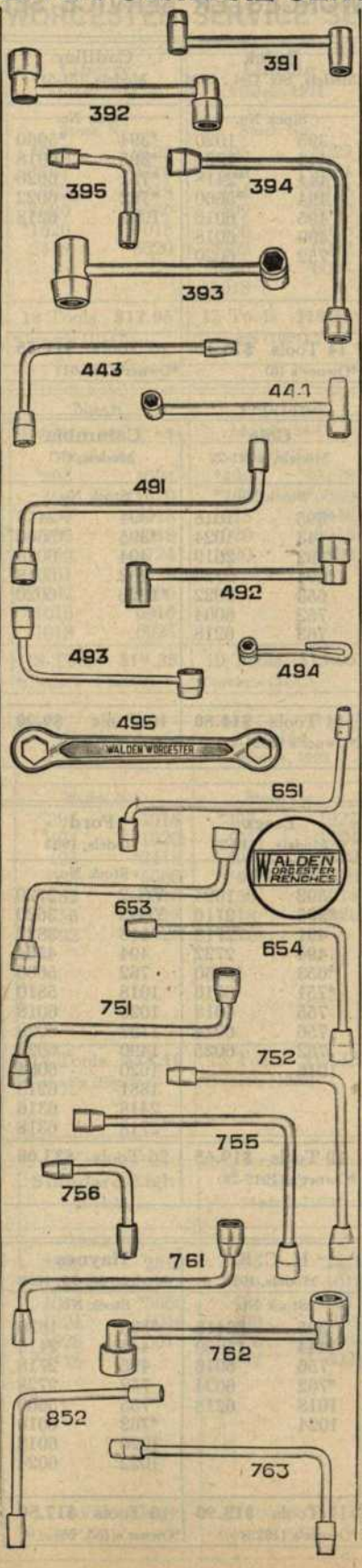
499 **Offset Wrench.** Length over all 5⅛". Socket size 9/16". **Each .50**

651 **Double End Offset Wrench.** Length over all 10". Socket sizes 7/16" and 9/16". **Each .80**

653 **Double End Offset Wrench.** Length over all 11". Socket sizes 7/8" and 3/4". **Each .85**

654 **L Type Wrench 10" x 6".** Socket sizes 1/2" and 11/16". **Each .80**





751 **Double End Offset Wrench.** Length over all 11-3/4". Socket sizes 5/8" and 25/32". **Each .80**

752 **L Type Wrench 8" x 8".** Socket sizes 9/16" and 11/16". **Each .80**

755 **L Type Wrench 10" x 7".** Socket sizes 5/8" and 3/4". **Each .80**

756 **L Type Wrench 4" x 4".** Socket sizes 1/2" and 7/16". **Each .70**

761 **Double End Offset Wrench.** Length over all 10-1/2". Socket sizes 3/4" and 5/8". **Each .80**

762 **Double End Offset Wrench.** Length over all 10-3/4". Socket sizes 1-1/16" and 1". **Each 1.35**

763 **L Type Wrench.** 9-1/2" x 4-1/4". Socket sizes 1/2" and 9/16". **Each .80**

852 **L Type Wrench.** 6-1/4" x 6-1/4". Socket sizes 7/16" and 1/2". **Each .80**

1620 **Tomahawk. Triple Socket Wrench.** This is the original Triple Socket Wrench trademark "TOMAHAWK," having 1/2" rod connecting the two sockets. The sockets are particularly shaped to increase their usefulness. 5/8" end socket used for spinning nuts on and off. Socket sizes 5/8" and 1/2". **Each .75**

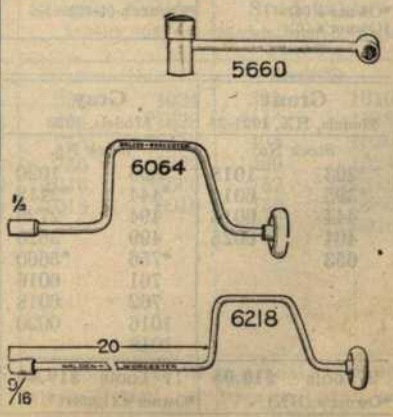
2418 **Double End Offset Wrench.** Length over all 9". Socket sizes 9/16" and 3/4". **Each .90**

2432 **Double End Offset Wrench.** Length over all 11-1/4". Socket sizes 1" and 3/4". **Each 1.15**

5660 **Triple Socket Offset Wrench.** Length over all 10-1/2". Socket sizes 15/16", 7/8" and 11/16". **Each 1.30**

6064 **Short Speed Wrench.** Length over all 13-3/8"; shank 5". Socket size 1/2". **Each .85**

6218 **Long Shank (20") Brace Speed Wrench.** Length over all 28". Socket size 9/16". **Each 1.20**



WALDEN-WORCESTER SERVICE SELECTIONS

Bay State
Models, 1924

Stock No.		Stock No.	
392	1018	499	*5660
394	1020	756	6016
395	1024	*762	6018
*444	1881	854	6020
494	*2418	1016	

19 Tools **$23.70**
*Owner's (1924)

Buick
Models, Four Cyl. 1922-23

Stock No.		Stock No.	
392	*5660	*653	6018
*444	6016	762	6020
		1024	6218
		2432	

11 Tools **$13.15**
*Owner's (4)

Buick
Models, Six Cyl., 1924

Stock No.		Stock No.	
395	1020	495	6016
443	1024	499	6018
*444	*2418	752	6020
494	*5660		

14 Tools **$15.10**
*Owner's (6)

Cadillac
Models, (51-61)

Stock No.		Stock No.	
*394	*5660	*762	6022
*395	6018	1022	6218
*751	6020		

10 Tools **$11.55**
*Owner's (51-61)

Chalmers
Models, C-35 (1923)

Stock No.		Stock No.	
395	2716	*762	6016
*444	2718	1018	6018
494	2720	1020	6022
756	2722	1022	6024
761	*5660	*2418	

19 Tools **$21.00**
*Owner's (C-35)

Chandler
Models, 1923

Stock No.		Stock No.	
392	*762	495	6016
394	1018	751	6025
395	1024		
*444	*2418		
491	2716		
494	6060		

16 Tools **$17.60**
*Owner's (1923)

Chevrolet
Models, 490 and Superior, 1923

Stock No.		Stock No.	
*391	2716	494	6016
394	2718	1020	6018
395	*5660	*2418	6024

12 Tools **$11.70**
*Owner's (490 and Superior. 1923)

Cleveland
Models, 1924

Stock No.		Stock No.	
395	1024	1016	*5660
494	*1620	1018	6016
499	*2418	1022	6064
755	2716		
756	2718		

16 Tools **$19.25**
*Owner's (1924)

Cole
Models, 1921-22

Stock No.		Stock No.	
*395	1018	*492	2619
443	1024	*494	2724

14 Tools **$14.80**
*Owner's (1921-22)

Columbia
Models, CC

Stock No.		Stock No.	
*394	2418	762	6018
*395	*5660	*1620	6020
494	6016		

10 Tools **$9.20**
*Owner's (CC)

Dodge
Models, 1924

Stock No.		Stock No.	
395	*2418	1016	6022
*444	*5660	1018	6024
494	6014	*1020	
756	6016		
*762	6018		

17 Tools **$20.40**
*Owner's (1924)

Dort
Models, 1923

Stock No.		Stock No.	
395	1018	752	6016
*444	*2418	755	6018
494	*3620	756	6064
495	*5660		

14 Tools **$13.50**
*Owner's (1923)

Durant
Models, 4 and 6, 1923

Stock No.		Stock No.	
395	1022	751	†*5660
†444	†*2418	*756	6016
		1016	6018
		1018	6024
		1020	6025

14 Tools **$19.05**
*Owner's (4)
†Owner's (6)

Earl
Models, 4-40 (1922-23)

Stock No.		Stock No.	
*395	2720	*761	6018
752	*5660	*1620	6024

8 Tools **$6.90**
*Owner's (4-40)

Essex
Models, 1919-23

Stock No.		Stock No.	
392	1024	755	6018
*395	2716	756	6024
491	2718	762	6025
494	2722	1016	
*653	*5660		
*751	6016		

19 Tools **$19.65**
*Owner's (1919-23)

Ford
Models, 1923

Stock No.		Stock No.	
VG-2	2720	1020	6018
VG-3	3620	1127	6020
118	3822	1490	6022
494	4564	1620	6064
762	5660	1881	6218
1018	5810	2418	6316
		2718	6318

26 Tools **$33.00**

Franklin
Models, Series 10 (1923)

Stock No.		Stock No.	
*395	1016	752	*5660
494	1018	*755	6016
499	*2418	756	6018

12 Tools **$13.10**
*Owner's (Series 10, 1923)

Gardner
Models, 1923

Stock No.		Stock No.	
222	1018	392	*2418
224	1020	395	*5660
*391	1127	755	6018
		762	6024

14 Tools **$16.10**
*Owner's (1923)

Grant
Models, HX, 1921-23

Stock No.		Stock No.	
*393	1018	494	6025
*395	6016	653	
444	6018		

9 Tools **$10.05**
*Owner's (HX)

Gray
Models, 1923

Stock No.		Stock No.	
395	1020	761	6016
*444	*2418	762	6018
494	2726	1016	6020
499	3620	1018	
*756	*5660		

17 Tools **$19.40**
*Owner's (1923)

H. C. S.
Models, 1923

Stock No.		Stock No.	
395	*2418	1018	6218
*444	*5660	1024	
756	6016		
*762	6024		

11 Tools **$13.90**
*Owner's (1923)

Haynes
Models, 55, 75, 1922

Stock No.		Stock No.	
*395	1620	752	2728
444	2418	*755	*5660
495	2718	*762	6016
		1020	6018
		1022	6024

16 Tools **$17.50**
*Owner's (55, 75)

Hudson
Models, 1920-23

Stock No.		Stock No.	
392	2716	*755	*5660
*395	2718	756	6016
491	2724	762	6018
*653	2725	1016	6026
		1028	6028

18 Tools **$19.00**
*Owner's (1920-23)

Hupmobile
Models, R, 1923

Stock No.		Stock No.	
395	1020	1016	*5660
*444	1024	1018	
755	*2418		

9 Tools **$14.55**
*Owner's (R, 1923)

WALDEN-WORCESTER SERVICE SELECTIONS (CONTINUED)

Jewett
Models, 18-22

Stock No.	
*394	*1620
*395	2418
494	*5660
495	6018
653	6020
752	

11 Tools **$9.45**
*Owner's (18-22)

Jordan
Models, M, MX, H, L, K

Stock No.	
395	1020
494	*1620
*495	2718
499	*5660
751	6016
*755	6018
761	6020

14 Tools **$13.05**
*Owner's (M, MX, H, L, K)

Liberty
Models, 10-C

Stock No.	
*395	2525
*761	2716
762	2718
1020	*5660
*1620	6018
2418	6020

12 Tools **$12.05**
*Owner's (10-C)

Lincoln
Models, 1924

Stock No.	
395	1022
*444	1024
494	*2418
499	*5660
756	6018
*762	6022
1016	6064
1018	

15 Tools **$19.55**
*Owner's (1924)

Locomobile
Models, 38-48 Owner's Selection

Stock No.	
392	1620
756	2432

4 Tools **$3.70**

Marmon
Models, 1924

Stock No.	
395	1016
494	1024
495	*1620
499	*2418
755	*5660
756	6016
*762	6020

14 Tools **$15.30**
*Owner's (1924)

Maxwell
Models, 25

Stock No.	
395	1020
*444	2418
494	*5660
*495	6016
756	6018
*762	6020
1018	

13 Tools **$15.05**
*Owner's (25)

Mitchell
Models, 1920-23

Stock No.	
*395	*1620
495	2724
*653	*5660
761	6016
762	6020
1020	6064

12 Tools **$12.55**
*Owner's (1920-23)

Nash
Models, 4 and 6 Cyl.

Stock No.	
395	1024
494	*1620
499	*2418
755	2518
756	2724
761	2728
*762	*5660
1016	6016
1018	6024

18 Tools **$19.55**
*Owner's (4 and 6)

Oakland
Models, 34-C

Stock No.	
*495	*2418
*762	*5660
1018	6016
1020	6018
1620	6022

10 Tools **$13.05**
*Owner's (34-C)

Oakland
Models, 54, 1923

Stock No.	
*395	1018
494	1020
752	*5660
*755	6018
756	

9 Tools **$10.75**
*Owner's (54)

Oldsmobile
Models, 30

Stock No.	
*395	1020
494	*2418
499	*5660
752	6016
755	6018
756	6064

12 Tools **$11.45**
*Owner's (30)

Oldsmobile
Models, 37A, 43A, 45B, 46, 47

Stock No.	
392	2716
‡*395	2718
493	2720
494	‡†*5660
†653	6016
756	6018
†*761	6020
‡†*762	6022
1016	6024
1020	6028
‡1620	6064
‡†2418	

23 Tools **$23.25**
*Owner's (37A) 6 cyl.
†Owner's (43A, 1921-22)
‡Owner's (45B, 46 and 47)

Overland
Models, 4, 1923

Stock No.	
395	*756
494	1024
499	*2418
752	*5660
*755	6016

10 Tools **$9.65**
*Owner's (4)

Packard
Single Six

Stock No.	
395	1018
494	*1620
495	*2418
653	*5660
752	6016
756	6018
*762	6020

14 Tools **$14.10**
*Owner's (Single 6)

Paige
Models, 1923

Stock No.	
*395	1022
494	1024
499	1620
*755	*5660
756	6018
1018	6020
1020	

13 Tools **$17.15**
*Owner's (1923)

Peerless
Series 56, 66

Stock No.	
†*395	*2432
494	2525
†495	2718
*653	2720
755	†5660
762	6016
1018	6018
1020	6019
1024	6020
†*1620	6064

20 Tools **$22.30**
*Owner's (Series 56)
†Owner's (Series 66)

Pierce-Arrow

Stock No.	
*395	*1620
491	2418
*494	2716
495	2718
651	2720
*653	2724
756	*5660
761	6016
*762	6018
1018	6020
1020	6024
1028	

23 Tools **$24.25**
*Owner's

Reo
Models, T, T6, U, U6

Stock No.	
112	854
120	1104
*395	*2432
495	2519
653	*5660
751	6064
762	

13 Tools **$11.30**
*Owner's (T, T6, U, U6)

Rickenbacker
Models, 1923

Stock No.	
395	*1620
494	*2418
499	2724
752	*5660
755	6016
756	6018
1018	

13 Tools **$12.00**
*Owner's (1923)

Standard Eight
Models, I

Stock No.	
*395	2519
762	2718
1018	*5660
1024	6016
1028	6018
*2418	

11 Tools **$14.85**
*Owner's (I)

Star
Models, 1923

Stock No.	
395	*2418
*444	1016
494	1018
499	1020
756	*5660
*762	6020

12 Tools **$15.25**
*Owner's (1923)

Stearns-Knight
Models, 1923

Stock No.	
395	1024
494	*1620
755	*2418
756	2722
1016	*5660
1018	6016

12 Tools **$14.75**
*Owner's (1923)

Studebaker
Models, Light 6, Special 6 and Big 6

Stock No.	
395	1016
*444	1018
494	1020
499	1024
752	*2418
755	*5660
756	6016

14 Tools **$18.00**
*Owner's (Light 6, Special 6 and Big 6)

WALDEN-WORCESTER SERVICE SELECTIONS (CONTINUED)

Stutz Models, S, G, H and K	Wills St. Claire Models, 1921-23	Willys-Knight Models, 1920-22	Winton Models, 1921-23	Autocar All Models	Commerce Models T, 12 and 16
Stock No.	Stock No.	Stock No.	Stock No.	Stock No.	Stock No.
392 1620	*395 1024	*751 1620	*395 1024	122 762	394 1024
*394 2522	*494 *2418	*752 2718	*444 *5660	128 1018	395 1620
*395 2526	756 *5660	755 *5660	*653 6016	226 1024	494 5660
494 2716	762 6016	*756 6016	*762 6018	228 1109	756 6016
756 2718	1018 6064	*761 6018	1018 6022	231 1620	761 6018
762 6016		762		232 2418	1018
*856 6018				240 2716	
7[illegible]8 6024				392 2718	
1020 6218				394 6016	
1028				395 6018	
				492 6024	
				716 6028	
				751	
19 Tools **$21.00**	10 Tools **$12.25**	11 Tools **$9.85**	10 Tools **$12.90**	25 Tools **$25.30**	11 Tools **$12.50**
*Owner's(S, G, H and K)	*Owner's (1921-23)	*Owner's (1920-22)	*Owner's (1921-23)		

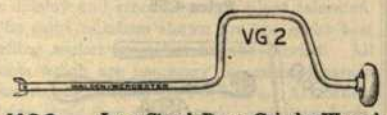
Federal Models, S. D., T. E., U. E., W. E., X. Z.	Ford Models, 1923	Garford Models, 15, 725, 80, 6SD	G. M. C. Models, K-16 (1 Ton)	G. M. C. Models, 16, 31, 41, K-41, K-101	International Models, S, Speed Truck, 1922
Stock No.	Stock No.	Stock No.	Stock No.	Stock No.	Stock No.
394 2418	VG-2 2720	392 1028	392 1018	392 1024	395 2418
395 5660	VG-3 3620	395 1620	395 1024	394 1620	495 2716
494 6016	118 3822	444 2418	494 1620	395 2418	762 2718
762 6018	494 4564	494 5660	499 2418	495 2720	1016 5660
1024 6020	762 5660	499 6018	653 5660	653 5660	1018 6016
1028 6024	1018 5810	1018 6020	751 6018	751 6016	1020 6018
1620	1020 6018	1020 6024	755 6020	756 6018	1620 6024
	1127 6020	1022 6028	756	762 6022	
	1490 6022	1024		1018 6028	
	1620 6064				
	1881 6218				
	2418 6316				
	2718 6318				
13 Tools **$15.15**	26 Tools **$33.00**	17 Tools **$22.90**	15 Tools **$15.80**	18 Tools **$19.65**	14 Tools **$17.55**

International Models, 21 and 31	International Models, 41 (2 Ton)	International Models, 61 (3 Ton)	International Models, 101 (5 Ton)	Mack Models, A. B. and A. C.	Oldsmobile	Packard Models 3, 3½ and 6½
Stock No.	Stock No.	Stock No.	Stock No.	Stock No.	Stock No.	Stock No.
395 2716	395 2716	395 2716	395 5660	395 1024	392 2716	395 1024
495 5660	495 5660	495 5660	653 6016	444 2418	395 2718	495 1620
653 6016	653 6016	653 6016	762 6024	499 5660	493 2720	499 2418
1024 6018	1024 6018	1024 6018	2418 6064	755 6018	756 5660	751 2716
1620 6019	1620 6019	1620 6024	2716	762 6020	761 6016	752 5660
2418	2418 6024	2418		1018 6024	762 6018	755 6016
				1020 6028	1620 6022	756 6018
						761 6020
						762
11 Tools **$11.40**	12 Tools **$12.35**	11 Tools **$11.40**	9 Tools **$8.50**	14 Tools **$17.70**	14 Tools **$12.30**	17 Tools **$16.30**

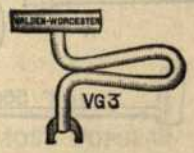
Pierce-Arrow Models, X-5, R-10, W-E	Reo Models, F, Speed Wagon	Republic Models, 10, 19-A, 2-X	Selden Models, 1½-A, 2½-A, 3½-A, 5-A	Stewart Models, 12, 9, 7, 11, 7-X, 10	Vim Models, ½ Ton and 1 Ton	White Models, 15, 20, 40, 45
Stock No.	Stock No.	Stock No.	Stock No.	Stock No.	Stock No.	Stock No.
395 1620	395 762	392 1028	394 1620	392 1028	395 2418	395 5660
491 2418	493 2432	394 1620	395 2418	395 1620	494 5660	495 6016
494 2716	653 2519	395 2418	491 5660	494 2418	755 6016	756 6018
495 2718	751 5660	494 5660	494 6016	495 2525	756 6018	762 6020
651 2720	756 6016	495 6016	495 6018	651 5660	762 6020	1028 6028
653 2724		653 6018	756 6020	752 6016	1024 6024	1620 6218
756 5660		762	762 6024	755 6018		
761 6016			1024 6026	761 6020		
762 6018			1028	762 6022		
1018 6020				1020 6024		
1020 6024				1024 6026		
1028						
23 Tools **$24.25**	10 Tools **$9.15**	13 Tools **$13.60**	17 Tools **$18.50**	22 Tools **$24.45**	12 Tools **$12.55**	12 Tools **$13.20**

WALDEN-WORCESTER WRENCHES

SERVICE WRENCHES FOR FORD CARS

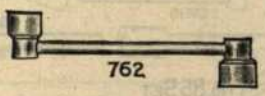


VG2 Long Shank Brace Grinder Wrench. Some garage men prefer the brace grinder in place of short grinder VG3. Fork end flexible and will reach all valves including one under dashboard. **Each .95**



VG3 Short Valve Grinder Wrench. The original wire handle valve grinder redesigned with 5/8" bar handle which swivels on cone bearing. The fork end fits the heat perfectly. **Each .55**

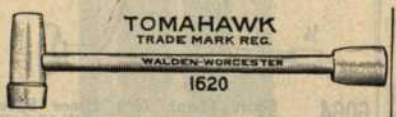
494 Single Socket Offset Wrench. Length over all 5-1/8". Socket size 1/2". Used on:
Crank case lower cover
Differential drive gear
Rear axle housing.
Each .50



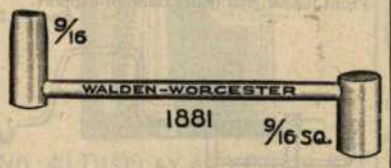
762 Double Socket Offset Wrench. Length over all 10-3/4". Socket sizes, 1-1/16" and 1". Used on:
Rear spring perch
TRUCK:
Rear spring clip
Each 1.35

1018 "Tee Flex" or Universal Joint Wrench. Length over all 13-1/4". Socket size 9/16". Used on:
Carburetor flange
(On cars without self starter)
Commutator case support
Cylinder valve cover
Inlet and exhaust clamp
Universal ball cap
Each 2.50

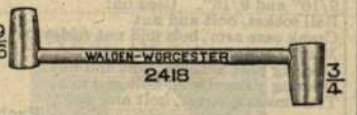
1020 "Tee Flex" or Universal Joint Wrench. Length over all 13-1/4". Socket size 5/8". Especially adapted for use on the Fourth Connecting Rod. Used on:
Connecting rod
Cylinder head
Water cylinder inlet connection
Each 2.50



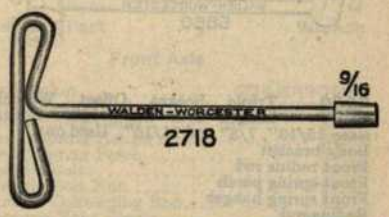
1620 Tomahawk Triple Socket Wrench. Socket sizes 5/8" and 1/2". This is the original Triple Socket Wrench, trademark "TOMAHAWK," having 1/2" rod connecting the two sockets. Used on:
Axle housing
Brake shoe support
Crank case lower cover
Cylinder head
Dash bracket to dash
Differential drive gear
Drive shaft roller bearing
Motor support, front
Muffler
Water cylinder inlet connection
Water cylinder outlet connection
Each .75



1881 Double End Offset Wrench. Length over all 9". Socket sizes 9/16" hex. and 9/16" square. Used on:
Crank shaft bolt
Piston pin
Locking screw
Running board
Running board to fender
Each 1.20

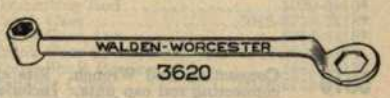


2418 Double End Offset Wrench. Length over all 9". Socket sizes 9/16" and 3/4". Used on:
Brake and reverse support
Brake shoe support
Clutch pedal support
Crank case arm
Crankshaft bearing nut
Crankshaft rear bearing bolt
Dash bracket to dash
Differential case
Fan bracket
Front fender iron
Front spring clip
Inlet and exhaust clamp
Radiator support
Spindle bolt nut
Steering post bracket
Steering yoke clamp
Universal ball cap
TRUCK:
Rear axle housing, front
Rear axle housing, rear
Each .90



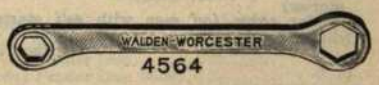
2718 Tee Handle Wrench. Handle 6" shank 12". Socket 9/16". Used on:
Commutator case support
Crank case
Cylinder cover
Fan adjustment
Magnet
Radiator support
Universal ball cap
Each .65

2720 Tee Handle Wrench. Handle 6", shank 12". Socket 5/8". Used on:
Commutator case support
(On cars with self starter)
Cylinder cover (on cars with self starter)
Drive shaft roller bearing
Each .65



3620 Spark Plug and Cylinder Head Wrench. Length over all 11". Socket sizes 15/16" and 5/8". The 15/16" hex. type opening has been so designed as to fit down squarely on the spark plug which is not true using usual claw or open end type.
The 5/8" socket has been shaped to make it possible to take all cylinder head cap screws, even the two under the dash on latest models.
Used on:
Cylinder head
Spark plug
Water cylinder inlet
Water cylinder outlet
Each .80

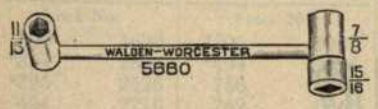
3822 Socket size 11/16" hex. Used on fly wheel cap screws, heretofore considered an impossible place for a socket wrench. An ugly place made accessible. **Each .70**



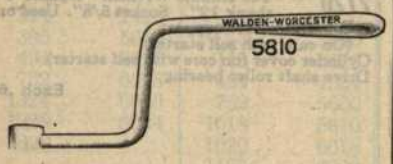
4564 Ratchet Wrench. 11/16" hex. opening. Particularly designed for use on the Ford brake and reverse transmission bands. Opposite end 15/16" for use on slow speed connecting lock nut. One of the most valuable tools to an owner on account of the ease in taking up bands. **Each 1.00**

WALDEN-WORCESTER WRENCHES

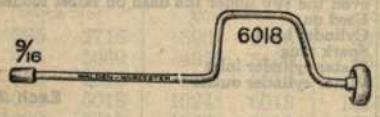
SERVICE WRENCHES FOR FORD CARS



5660 Triple Socket Offset Wrench. Length over all 10½". Socket sizes 15/16", 7/8" and 11/16". Used on:
Body bracket
Front radius rod
Front spring perch
Front spring hanger
Radius rod
Rear hub nut
Rear spring clip
Rear spring hanger
Rear wheel to brake drum
Spindle bolt
Spindle connecting rod
TRUCK:
Brake support
Rear axle housing split
Rear spring hanger
Each 1.30



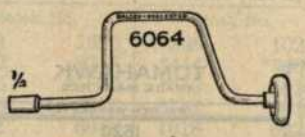
5810 Connecting Rod Wrench. Fits all connecting rod cap nuts. Includes the fourth connecting rod. This is an original design, the first wrench made to reach the fourth connection without removing the engine from the car. Be sure you get the wrench with all right angle bends and loop handle. No. 5810 stamped on handle. **Each .60**



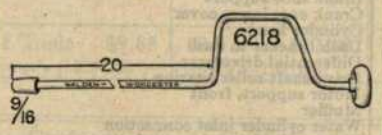
6018 Long Shank (11") Brace Speed Wrench. Length over all 19-1/4". Socket size 9/16". Used on:
Commutator case support
Crank case
Cylinder cover
Fan adjustment
Magnet
Transmission cover
Each .95

6020 Long Shank (11") Brace Speed Wrench. Length over all 19-1/4". Socket size 5/8". Used on:
Commutator case support (on cars with self starter)
Cylinder cover (on cars with self starter)
Cylinder head
Each .95

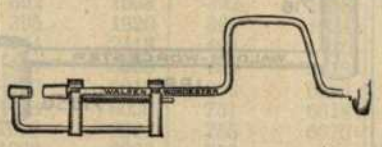
6022 Long Shank (11") Brace Speed Wrench. Length over all 19-1/4". Socket size 11/16". Used on:
TRUCK:
Rear axle housing split
Each .95



6064 Short Shank (5") Brace Speed Wrench. Length over all 13-3/8". Socket size 1/2". Used on:
Crank case lower cover
Differential drive gear
Muffler
Rear axle housing
Steering tube flange
Each .85



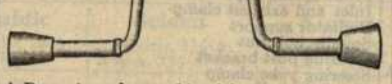
6218 Long Shank (20") Brace Speed Wrench. Length over all 28". Socket size 9/16". Used on:
Front fender iron (side) radiator support.
Each 1.20



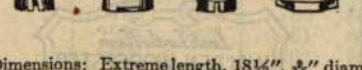
6316 Nut and Bolt Speed Wrench. Socket sizes 1/2" and 1/2". Any Ford mechanic who sees this bolt and nut speed wrench, will immediately recognize its usefulness in splitting the rear axle housing on the Ford car. With this wrench one man can do the work of two. Used on:
Rear axle housing bolt and nut
Each 3.00

6318 Nut and Bolt Speed Wrench. Length over all 20-3/8". Socket sizes 9/16" and 9/16". Used on:
Ball socket, bolt and nut
Crank case arm, bolt and nut (side)
Muffler support, bolt and nut
Steering post bracket, bolt and nut
Steering yoke clamp, bolt and nut
Transmission cover, bolt and nut
Each 3.00

NEW WHEEL ASSEMBLY WRENCH FOR FORD CARS



A Brace (speed wrench), with two sockets, each socket having two broached openings to take four parts, front hub cone and axle nut, hub cap and rear axle nut.

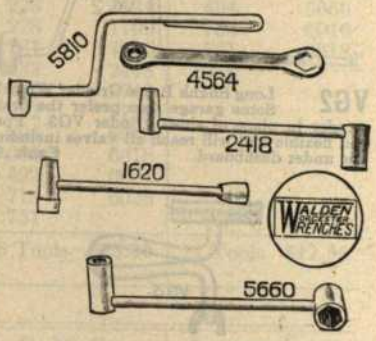


Dimensions: Extreme length, 18½", ⅞" diameter, 6" leverage, 12" sweep, swivel handles on each end adjoining socket.

1490 **Each 3.00**

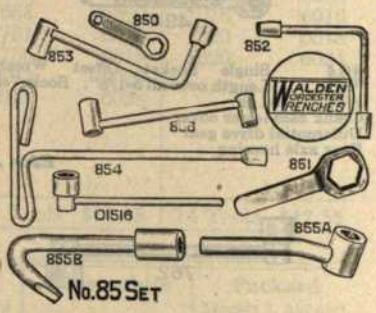
NO. 57 SET - FORD CAR

Price 4.55



NO. 85 SET FOR FORDSON TRACTOR

Each 9.00



Clutch housing bolt	85[illegible]
Clutch lever bracket bolt	85[illegible]
Clutch shaft nut	851
Connecting rod cap bolt nut	85[illegible]
Crank case bolt	85[illegible]
Crank case nut	856
Crank shaft bearing cap bolt nut	
Main bearing nut	853
Cylinder front cover bolt	856
Cylinder front cover cap screw	856
Cylinder head cap screw	856
Dash cap screw	853
Differential housing bolt	856
Differential housing	855-B
Exhaust tube bracket bolt	852
Fan adjusting nut and screw	850
Foot bracket cap screw	854
Front wheel spindle nut	855-A
Fuel tank strap nut	856
Gear shifter plate cap screw	854
Radiator connection bolt	856
Radiator connection bolt nut	856
Radiator cover bolt	856
Radiator cover bolt nut	856
Radiator tank bolt	852
Radiator tank bolt nut	852
Radiator top tank cap screw	854
Radius rod bolt nut	01516
Rear axle housing cap screw	853
Rear axle split	856-855-B
Rear wheel hub cap screw	855-A-B
Steering arm ball nut	01516
Steering arm nut	855-A
Steering shaft nut	01516
Steering wheel nut	850-01516
Transmission housing bolt	856
Transmission housing bolt nut	856
Transmission housing cap screw	856
Transmission draw bar cap screw	853
Transmission housing plate cap screw	856
Transmission oil plug	855-A

WALDEN-WORCESTER WRENCHES

No. 40 Display and Stock Set

A display and stock board, a silent salesman. The eight numbers shown are the eight best selling socket wrenches on the market. All tools which are necessary for general garage service, particularly on Ford cars. All owners doing their own repair work need these tools. A small outlay by the dealer; an assured quick turnover. The hooks, board and wrenches all packed in one box quickly set up for business and requires only space three feet nine inches by one foot.

The 8 Most Popular Socket Wrenches

Indispensable for Ford Cars and General Service

Board and Hooks	6½ lbs.
Wrenches (net weight)	50 lbs.
Boxed for Shipment	70 lbs.
No. 40 Set	35.50

No. 40 Display and Stock Set

Board Size, 3 ft. 9 in. x 1 ft.
40 Wrenches

5	1520	1.10	5.50
5	1620	.75	3.75
5	2418	.90	4.50
5	2718	.65	3.25
5	3620	.80	4.00
5	5660	1.30	6.50
5	5810	.60	3.00
5	7018	1.00	5.00
40 Wrenches			Total $35.50

No. 80 Display and Stock Set

These free Display Boards have wooden backs, the front is of sheet metal handsomely lithographed in black and golden rod, the hooks are held by nut and check nut and there is no possibility of the board warping out of shape. An ornament to any store and a valuable sales producer.

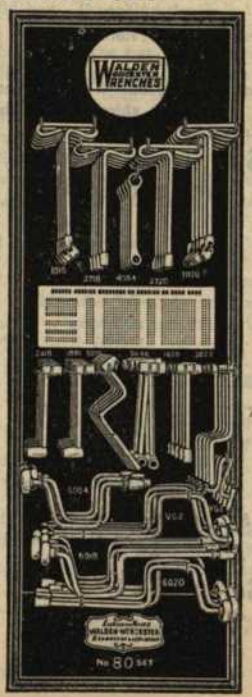
No. 80 Display and Stock Set

5	VG2	.95	4.75
5	VG3	.55	2.75
5	1018	2.50	12.50
5	1020	2.50	12.50
5	1620	.75	3.75
5	1881	1.20	6.00
5	2418	.90	4.50
5	2718	.65	3.25
5	2720	.65	3.25
5	3822	.70	3.50
5	4564	1.00	5.00
5	5660	1.30	6.50
5	5810	.60	3.00
5	6018	.95	4.75
5	6020	.95	4.75
5	6064	.85	4.25
80 Wrenches		**Total,**	**$85.00**

Board and Hooks (crated)	50 lbs.
Wrenches (boxed for shipment)	103 lbs.
Wrenches (net weight)	85 lbs.
Size of Board, 6 ft. x 2 ft.	

80 Wrenches Complete with Display Board

80 Set 85.00



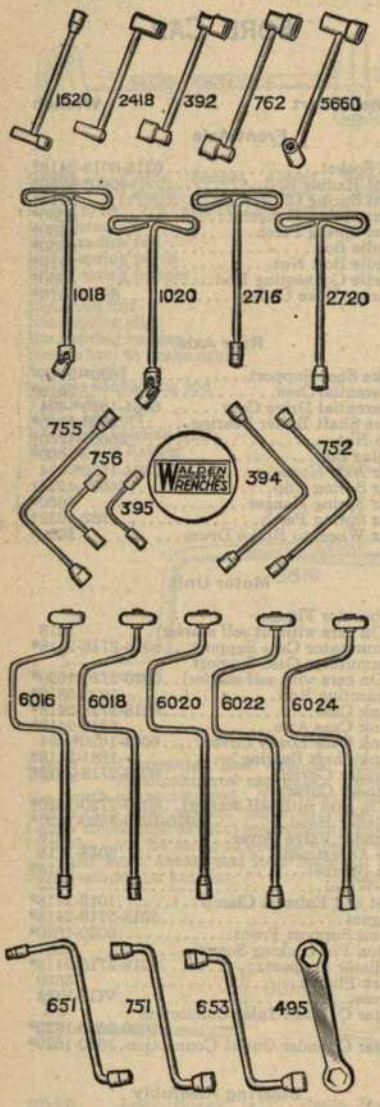
Directory of Wrenches Ford Car

Name of Part	Wrench
Front Axle	
Ball Socket	6318-6018-2418*
Front Radius Rod	5660*-4230†
Front Spring Clips	2418*
Front Spring Hanger	5660*
Front Spring Perch	5660*
Spindle Bolt	5660*
Spindle Bolt Nut	2418*
Spindle Connecting Rod	5660*
Steering Yoke Clamp	6318-2418*
Rear Axle	
Brake Shoe Support	1620*-2418*
Differential Case	2418*
Differential Drive Gear	6064-1620*-494
Drive Shaft Roller Bearing	2620-1620*
Hub Nut	5660*-4230†
Radius Rod	5660*
Rear Axle Housing	6316-6064-1620*-494
Rear Spring Clip	5660*-4228†
Rear Spring Hanger	5660*
Rear Spring Perch	762-4232†
Rear Wheel to Brake Drum	5660*
Motor Unit	
Carburetor Flange (On cars without self starter)	1018
Commutator Case Support	6018-2718-2418*
Commutator Case Support (On cars with self starter)	6020-2720-1620*
Connecting Rod	1020-5810*
Crank Case	6018-2718-2418*
Crank Case Arm	6318-2418*
Crank Case Lower Cover	6064-1620*-494
Crank Shaft Bearing	1881-2418*
Cylinder Cover	6018-2718-2418*
Cylinder Cover (On cars with self starter)	6020-2720-1620*
Cylinder Head	6020-1020-3620-1620*
Cylinder Valve Cover	1018
Fan Adjustment	6018-2718
Fan Bracket	2418*
Fly-Wheel	3822
Inlet and Exhaust Clamp	1018-2418*
Magnet	6018-2718-2418*
Motor Support Front	6020-1620*
Piston Pin Locking Screw	1881
Radiator Support	6218-2718-2418*
Spark Plug	3620
Valves	VG2-VG3
Water Cylinder Inlet Connection	1020-3620-1620*
Water Cylinder Outlet Connection	3620-1620*
Steering Assembly	
Steering Post Bracket	6318-2418*
Steering Tube Flange	6064
Transmission	
Brake Adjustment	4564*
Brake and Reverse Support	2418*
Clutch Pedal Support	2418*
Controller Shaft Bracket	2418*
Hub Brake Rod Support	1620*
Low Speed Check Nut	4564*
Reverse Adjustment	4564*
Transmission Cover	6018-6318-2418*
Universal Ball Cap	1018-2718-2418*
Miscellaneous	
Body Bracket	5660*
Dash Bracket to Dash	6064-1620*
Front Fender Iron	2418*
Front Fender Iron (side)	6218
Muffler	6064-6318-1620*
Running Board	1881
Running Board to Fender	1881

*Indicates uses for owner's selection.

Note—†May not be carried in all Jobbers' stocks but will be ordered for you upon request.

NO. 23 GARAGE SERVICE SET



These 23 wrenches, some with two or three socket sizes, make possible 38 different combinations.

Offset wrenches	17
L-wrenches	10
Speed wrenches	5
Tee-handle wrenches	2
Tee-flex wrenches	2
Box type wrenches	2
Total	38

Garage owners will instantly recognize the utility of this assortment.

NO. 23 SET. PRICE 23.00

NEW DISPLAY BOARD SOCKET WRENCHES FOR CHEVROLET CARS

39A BOARD

Two new silent salesmen carrying socket wrenches for Chevrolet cars. Because of the number of Chevrolet cars in service, these wrenches are in constant demand.

NO. 39A BOARD

5	391	.80	4.00
5	394	.85	4.25
5	395	.70	3.50
5	494	.50	2.50
5	2418	.90	4.50
5	5660	1.30	6.50
			25.25

Board and Hooks, 4 lbs. Wrenches, net weight, 27 lbs. Boxed for shipment, 45 lbs. Size 3 ft., 7 in. x 12 in.

39A Set Each 25.25

NO. 39B BOARD

5	391	.80	4.00
5	394	.85	4.25
5	395	.70	3.50
5	494	.50	2.50
5	1020	2.50	12.50
5	2418	.90	4.50
5	2716	.65	3.25
5	2718	.65	3.25
5	4234	1.65	8.25
5	5660	1.30	6.50
5	6016	.95	4.75
5	6018	.95	4.75
5	6024	.95	4.75
			66.75

Board, 52 lbs. Board boxed for shipment, 108 lbs. Wrenches and hooks, 88 lbs. Size 6 ft. x 2 ft.

39B Set Each 66.75

HEAY DUTY OFFSET SOCKET WRENCHES

Our new 4200 Series of heavy duty offset wrenches meets a demand for an improved type of offset wrenches.

The deep sockets allow for full thickness of the nut or bolt head, also sufficient depth to permit the bolt to extend through the nut.

The handles are long and heavy permitting a mechanic to start any bolt without using a length of pipe.

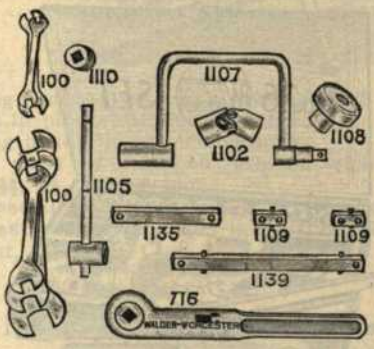
The sockets are designed for maximum of strength and minimum of clearance required.

HEAVY DUTY OFFSET SOCKET WRENCHES
4200 SERIES

4200 SERIES		NUT & BOLT SIZES			DIMENSIONS				WEIGHTS		
STOCK NO.	SOCKET SIZE	S.A.E. Nuts & Cap Screws	U.S. STAND. NUTS	U.S.S. CAP SCREWS	HANDLES	O.D. SOCKET	LENGTH SOCKET	CLEARANCE — HANDLE	COMPLETE	SOCKET ONLY	LIST PRICES
4228	7/8	9/16	1/2	5/8	5/16×10	1 23/64	2 1/4	1 3/8	1.40	.50	1.10
4230	15/16	5/8			5/16×10	1 3/64	2 1/4	1 3/8	1.50	.60	1.10
4231	31/32		9/16		5/16×10	1 3/64	2 1/4	1 3/8	1.50	.60	1.30
4232	1	11/16		3/4	3/4×12	1 3/64	2 1/2	1 17/32	1.60	.60	1.40
4234	1 1/16	3/4	5/8		3/4×12	1 39/64	2 1/2	1 1/2	2.00	.75	1.65
4236	1 1/8			7/8	3/4×12	1 39/64	2 5/8	1 19/32	2.10	.85	1.80
4238	1 3/16				3/4×12	1 55/64	3	2 1/32	2.50	1.25	1.95
4240	1 1/4	7/8	3/4	1	3/4×15	1 55/64	3	2	3.00	1.25	2.20
4242	1 5/16				3/4×15	2 7/64	3 1/4	2 1/4	3.50	1.65	2.30
4244	1 3/8			1 1/8	3/4×15	2 7/64	3 1/4	2 1/4	3.50	1.65	2.50
4246	1 7/16	1	7/8		7/8×18	2 15/64	3 1/4	2 3/16	4.75	1.80	2.75
4248	1 1/2			1 1/4	7/8×18	2 15/64	3 1/4	2 1/8	4.75	1.80	3.00
4250	1 9/16				7/8×18	2 23/64	3 3/8	2 5/8	5.50	2.45	3.00
4252	1 5/8	1 1/8	1		7/8×18	2 23/64	3 3/8	2 5/8	5.50	2.45	3.30
4254	1 11/16				7/8×18	2 39/64	3 3/8	2 9/16	6.00	2.85	3.50
4256	1 3/4				1×20	2 39/64	3 3/8	2 9/16	7.25	2.85	3.50
4258	1 13/16	1 1/4	1 1/8		1×20	2 39/64	3 3/8	2 9/16	7.25	2.85	3.85
4260	1 7/8				1×24	2 55/64	4 3/8	3 1/16	9.00	3.50	4.10
4264	2	1 3/8	1 1/4		1×24	2 55/64	4 3/8	3 1/16	9.50	4.00	4.40

WALDEN-WORCESTER WRENCHES

INTER-CHANGEABLE SOCKET WRENCH PARTS



RATCHET WRENCHES—½" square opening 9" and 12" lengths. The special type of pawl reduces tension in backing up wrench also gives maximum strength and always positive smooth action. The ratchet action is reversed by turning over the wrench eliminating complicated reversing mechanism which also would reduce strength and positive action of the tool—only three working parts which are made of high grade steel and properly tempered.

716— 9 inch — Each 2.75
716—12 inch — Each 3.30

1102 **Universal Joints** are solid steel full machined finish used in combination with ratchet wrench extension bars and sockets working successfully at 45 degree angle.

Each 1.80

1107 **Brace Wrench.** Length over all 9¾", sweep 10". For use with various sockets and combination parts. Ends of brace are provided with ball friction to hold parts in engagement. Each 1.20

1108 **Brace Top** a pressed steel handle, working on cone bearing and provided with socket end to fit brace wrench and various combination parts. Valuable auxiliary with extension bar ratchet wrench and socket on overhead work—millwrights particularly will appreciate this attachment and combination. Each .60

1178 **Brace Wrench with Top Handle.** When ordering complete tool please use this number—1178.

Each 1.80

1135-1139 **Extension Bars also Shanks** for Combination Tee and offset handle No. 1105. Bars have ball friction on either end to retain sockets and other parts in engagement.

1135—5" — Each .50
1139—9" — Each .60

SOCKET STOCK NUMBERS Square	Hexagonal	SOCKET SIZES	SIZES SCREW-BOLT-NUTS S.A.E. Nuts Cap Screws	U.S. Stan. Nuts	U.S. Stan. Cap Screws	U.S. Bolt Heads Stan. Unfinished
112		3/8				
114	214	7/16	1/4		1/4	
116	216	1/2	5/16	1/4	5/16	1/4
118	218	9/16	3/8		3/8	
	219	19/32		5/16		5/16
120	220	5/8	7/16		7/16	
122	222	11/16		3/8		3/8
124	224	3/4	1/2		1/2	
	225	25/32		7/16		7/16
	226	13/16			9/16	
128	228	7/8	9/16	1/2	5/8	1/2
	230	15/16	5/8			
	231	31/32		9/16		9/16
132	232	1	11/16		3/4	
	234	1 1/16	3/4	5/8		5/8
136	236	1 1/8			7/8	
140	240	1 1/4	7/8	3/4	1	3/4

SOCKET PRICES

112-118	$0.40	136-140	$0.80
120	.45	214-222	.40
122	.50	224-225	.45
124	.55	226-230	.50
128	.65	231-232	.60
132	.75	234-240	.65

Sockets. Sockets are machine made from the solid bar. Broaching depth is the thickness of the nut to be fitted, and broached 1/64" over the size of the nut. Sockets are counter drilled making extreme bolt size depth of socket ½" more than the thickness of the nut. The outside diameter of the socket size and taper have been designed to insure strength and service conditions. The broached end is countersunk slightly to relieve the square edges and to allow more rapid placing of socket on bolt head. All sockets are heat treated to toughen them.

1104 **Combination Tee and Offset Handle Wrench** with extension. The shank or extension bar (1135) is removable. The ball friction on both ends to couple combination parts or sockets.

Each 1.10

1105 **Combination Tee and Offset Handle.** This number covers the handle only as illustrated. If complete tool is wanted, order No. 1104. Each .60

1109 **Plug Connector.** Square bar connector, with ball friction on each end for coupling combination parts.

Each .35

1110 **Socket Connector.** Round socket with ½" square hole for coupling combination parts. Each .35

HEAVY DUTY WRENCHES

Popular types of wrench handles with interchangeable sockets are many times the desirable wrench equipment.

Recognizing this demand and also the necessity for heavier style of tools the following numbers are stock items.

These handles are usable with all interchangeable parts in our regular sets and sockets, our series Nos. 100 and 200.

BRACE SOCKET WRENCH

Shank 2-1/2". Length over all 12". Wire 5/8". Sweep 12". Throw 6".

No. 1114 — Each 1.40

OFFSET HANDLE WRENCH

Length over all 12". Wire 11/16".

No. 1125 — Each .80

BRACE SOCKET WRENCH

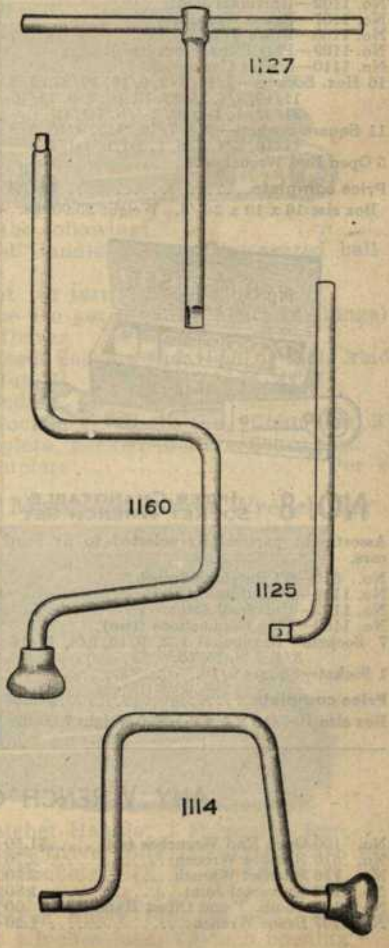
Long Shank 10-1/2". Length over all 20". Wire 5/8". Sweep 12". Throw 6". A considerably heavier speed wrench than our 6000 series. Extra sweep allows more leverage for use with large size sockets.

No. 1160 — Each 1.65

TEE HANDLE WRENCH

Shank 10-1/2" x 11/16". Handle 12" x 1/2" Handle is adjustable to make L. type.

No. 1127 — Each 1.40



WALDEN-WORCESTER WRENCHES

INTER-CHANGEABLE SOCKET WRENCH SETS

NO. 27 INTER-CHANGEABLE SOCKET WRENCH SET

A complete, heavy duty socket wrench set for use by mechanics or millwrights in service station, garage or general factory and mill service.

No. 716—12" Ratchet Wrench.
No. 1135— 5" Extension Bar.
No. 1139— 9" Extension Bar.
No. 1105—Combination T and Offset Handle.
No. 1102—Universal Joint.
No. 1107—Brace Wrench.
No. 1108—Brace Top.
No. 1109—Plug Connectors (two).
No. 1110—Socket Connector.
16 Hex. Sockets—7/16, 1/2, 9/16, 19/32, 5/8, 11/16, 3/4, 25/32, 13/16, 7/8, 15/16, 31/32, 1, 1-1/16, 1-1/8, 1-1/4.
11 Square Sockets—3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 7/8, 1, 1-1/8, 1-1/4.
5 Open End Wrenches..

Price complete.....$27.00
Box size 16 x 10 x 2-7/8. Weight 25.00 lbs.

NO. 8 INTER-CHANGEABLE SOCKET WRENCH SET

Assortment particularly selected to fit Ford cars.

No. 516—9" Ratchet Wrench.
No. 1139—9" Extension Bar.
No. 1102—Universal Joint.
No. 1109—Plug Connections (two).
7 Sockets—Hexagonal 1/2, 9/16, 5/8, 11/16, 3/4, 7/8, 15/16.
1 Socket—Square 9/16.

Price complete.....$10.00
Box size 10-7/16 x 4 x 2-5/8. Weight 7.00 lbs.

INTERCHANGEABLE STEEL SOCKETS

Sockets—Sockets are machine made from the solid bar. Broaching depth is the thickness of the nut to be fitted, and broached 1/64" over the size of the nut. Sockets are counter drilled making extreme bolt size depth of socket 1/2" more than the thickness of the nut. The outside diameter of the socket size and taper have been designed to insure strength and service conditions. The broached end is countersunk slightly to relieve the square edges and to allow more rapid placing of socket on bolt head. All sockets are heat treated to toughen them.

SOCKET STOCK NUMBERS		SOCKET SIZES	SIZES SCREW-BOLT-NUTS			
			S.A.E. NUTS CAP SCREWS	U.S. STAN. NUTS	U.S. STAN. CAP SCREWS	U.S. STAN. BOLT HEADS UNFINISHED
SQUARE	HEXAGONAL					
112		3/8				
114	214	7/16	1/4		1/4	
116	216	1/2	5/16	1/4	5/16	1/4
118	218	9/16	3/8		3/8	
	219	19/32		5/16		5/16
120	220	5/8	7/16		7/16	
122	222	11/16		3/8		3/8
124	224	3/4	1/2		1/2	
	225	25/32		7/16		7/16
	226	13/16			9/16	
128	228	7/8	9/16	1/2	5/8	1/2
	230	15/16	5/8			
	231	31/32		9/16		9/16
132	232	1	11/16		3/4	
	234	1 1/16	3/4	5/8		5/8
136	236	1 1/8			7/8	
140	240	1 1/4	7/8	3/4	1	3/4

NO. 26 INTER-CHANGEABLE SOCKET WRENCH SET

This set is similar in every respect to the No. 27 Set except that it does not contain the series of square sockets. It is especially well adapted for use in service stations, garages and repair shops, on all classes of automotive work.

No. 716—12" Ratchet Wrench.
No. 1135— 5" Extension Bar.
No. 1139— 9" Extension Bar.
No. 1105—Combination T and Offset Handle.
No. 1102—Universal Joint.
No. 1107—Brace Wrench.
No. 1108—Brace Top.
No. 1109—Plug Connectors (two).
No. 1110—Socket Connector.
16 Hex. Sockets—7/16, 1/2, 9/16, 19/32, 5/8, 11/16, 3/4, 25/32, 13/16, 7/8, 15/16, 31/32, 1, 1-1/16, 1-1/8, 1-1/4.
5 Open End Wrenches.

Price complete.....$21.00
Box size 16 x 10-1/2 x 2-7/8. Weight 19.25 lbs.

NO. 16 INTER-CHANGEABLE SOCKET WRENCH SET

A most desirable socket wrench set for owner's use and for general service where the purchase of the larger No. 27 set would not be warranted.

No. 516—9" Ratchet Wrench.
No. 1139—9" Extension Bar.
No. 1102—Universal Joint.
No. 1109—Plug Connectors (two).
16 Sockets—Hexagonal 7/16, 1/2, 9/16, 19/32, 5/8, 11/16, 3/4, 25/32, 13/16, 7/8, 15/16, 31/32, 1, 1-1/16, 1-1/8, 1-1/4.

Price complete.....$14.50
Box size 12 x 5-1/4 x 2-5/8. Weight 11.00 lbs.

ANY WRENCH OR SOCKET MAY BE OBTAINED SEPARATELY

No. 100 Open End Wrenches (set)	$1.50
No. 516 Ratchet Wrench	2.75
No. 716 Ratchet Wrench	3.30
No. 1102 Universal Joint	1.80
No. 1105 Comb. T and Offset Handle	.60
No. 1107 Brace Wrench	1.20
No. 1108 Brace Top	.60
No. 1109 Plug Connector	.35
No. 1110 Socket Connector	.35
No. 1135—5" Extension Bar	.50
No. 1139—9" Extension Bar	.60
No. 1178 Brace Wrench	1.80

STEEL SOCKETS

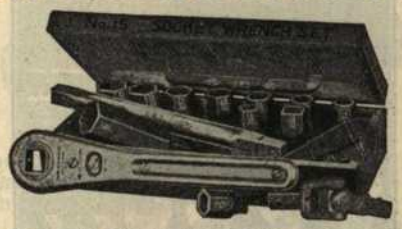
112-118	$0.40	136—140	$0.80
120	.45	214—222	.40
122	.50	224—225	.45
124	.55	226—230	.50
128	.65	231—232	.60
132	.75	234—240	.65

No. 6 Mossberg Socket Wrench Set

Folding handle gives ample leverage and its length makes it useful in places difficult of access.
Folding handle is 3½ inches long.
Eight sizes of hexagon pressed steel sockets: 17/32, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 1 5/16-inch,
One special spark plug socket, 13/16x4 inches.
Each set complete packed in substantial wooden case.
Weight, 2½ lbs.

No. 6.....Per set, 3.25

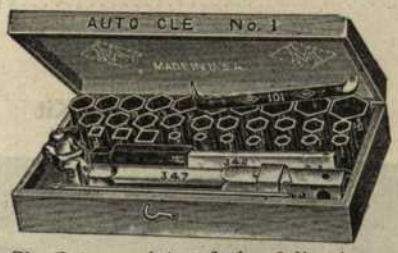
No. 15 Mossberg Socket Wrench Set



This Set is made especially for Ford cars. It is provided with a wrench to fit every nut and bolt on a Ford car. It is fully guaranteed and always dependable.
Eliminates the need of any other wrenches.
This set consists of:
1 Mossberg ratchet wrench No. 350, and extension bar.
10 Pressed steel hardened sockets as follows: 15/32, 17/32, 9/16, 11/16, 3/4, 25/32, 7/8, 1/2 hexagon, 15/32, 1/2 square.
1 Spark plug socket, 13/16-inch. 1 Universal joint. 1 screw driver.
Each set complete packed in substantial wooden case.
Weight, 5¾ lbs.

No. 15.....Per set, 7.50

No. 1 Auto Cle Wrench Set



The Auto Cle Set consists of the following: One take-down reversible ratchet handle; one swivel or universal joint, which permits using the wrench at any angle; one 9½-inch extension bar; one 1¾-inch extension bar; one offset screw driver; 31 sizes of Mottled Case-hardened Pressed Steel Sockets. Sizes of sockets furnished:

Hexagon

1/4, 11/32, 3/8, 13/32, 7/16, 15/32, 1/2, 17/32, 9/16, 19/32, 5/8, 21/32, 11/16, 23/32, 3/4, 25/32, 13/16, 27/32, 7/8, 29/32, 15/16, 1, 1 1/32, 1 1/16, 1 3/32 and 1 1/8-inch.
Special Spark Plug Socket, 13/16 hexagon, 4 inches long.

Square

11/32, 13/32, 15/32-inch.

These sockets will fit all set screws, bolts and nuts in general use on automobiles, whether American or foreign manufacture.
The above parts and sockets are contained in a compact case, fitted with pegs, on which to place the sockets, thus making loss of parts unlikely and preventing rattle or noise.
Each set complete packed in substantial wooden case.
Weight, 8¾ lbs.

No. 1.....Per set, 12.00

No. 14 Mossberg Socket Wrench Set

Handles for every kind of difficult approach. Sockets to fit every possible size between 1/16 and 1 3/32-inch.
This set consists of:
1 Mossberg ratchet wrench No. 350. and extension bar.
1 Mossberg No. 331 solid Tee handle. 10 inches long.
1 Mossberg No. 320 offset socket wrench.
1 6-inch combination plier.
1 Set (5) double end wrenches, extra finish.
1 No. 101 offset screw driver.
1 Universal joint.
37 Pressed Steel Sockets.
23 sizes in Hexagon: 1/16, 3/8, 13/32, 7/16, 15/32, 1/2, 17/32, 9/16, 5/8, 21/32, 11/16, 23/32, 25/32, 13/16, 27/32, 7/8, 29/32, 15/16, 1, 1 1/32, 1 1/16, 1 3/32, 1 1/8.
11 sizes in Square: 13/32, 15/32, 17/32, 19/32, 21/32, 23/32, 25/32, 27/32, 29/32, 1 1/32, 1 1/16, 1 3/32.
3 Special Spark Plug Sockets: 13/16, 7/8, 1 5/16.
Each set complete packed in substantial wooden case.
Weight, 17½ lbs.

No. 14.....Per set, 17.00

No. 30 Mossberg Ford Socket Wrench Set

Consisting of the following:
Ratchet Socket Handle (with spring-seated ball to lock sockets).
Universal Joint (to turn "round a corner").
Extension Tube (to get into the heart of things).
Offset Screw Driver.
Ten Pressed Steel Sockets (heaviest of their kind).
Sizes in the Hex, 15/32, 17/32, 9/16, 5/8, 11/16, 25/32, 27/32, 7/8.
Sizes in the Square, 15/32.
Spark Plug Socket 7/8 to fit the "Champion X" plug.
Each set complete, packed in fibre board box. 4¾ lbs.

No. 30—Set Complete.....Per set, 5.75

No. 10 Mossberg Socket Wrench Set

Contains 1 Ratchet Handle; 1 Extension Bar; 1 Universal Joint; 2 Screw Driver Bits; Hexagon, Case Hardened, 19 Pressed Steel Sockets: 15/32, 1/2, 17/32, 9/16, 5/8, 21/32, 11/16, 23/32, 25/32, 13/16, 27/32, 7/8, 29/32, 15/16, 1, 1 1/32, 1 1/16, 1 3/32, 1 1/8-inch.
Special Hexagon Spark Plug Sockets; 4 inches long, 13/16-inch opening; 4 inches long, 1 5/16-inch opening.
Each set complete packed in substantial wooden case.
Weight, 7¾ lbs.

No. 10.....Per set, 9.75

No. B Quickway Socket Wrench Set

A general utility set. Takes care of most nuts on Ford and other cars. Strong hexagon handle gives great leverage. Socket sizes ½, 7/16, 5/8, 11/16 and ¾ in. Neatly packed in an attractive, durable imitation leather case.

No. B.....Per set, $1.00

No. A Quickway Socket Wrench Set

A small, neat, extremely efficient set for special work on carburetors, magnetos, generators, etc. For mechanics, electricians, repairmen and auto owners.

Contains detachable T-handle with ball check in the end and following sockets: 3/32, 5/16, 11/32, 3/8, 7/16, 15/32, and ½ in. Packed in attractive red metal box.

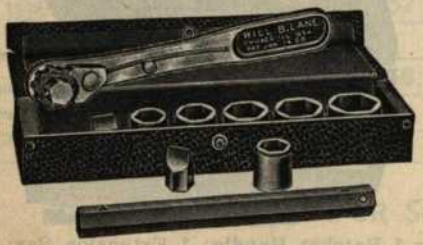
No. A .....Per set, $1.50

No. D Quickway Socket Wrench Set

This set takes care of practically all assembly and adjustment operations. Twenty-three sockets, of deep type ranging from 3/32 to 30/32 in., by thirty-seconds. Bent handle and T-handle, universal extension bars and Bethlehem drop-forged ratchet wrench. Complete set highly finished in copper-oxidized and beautifully mounted in heavy hardwood box. Weight, 8½ lbs.

No. D.....Each, $12.50

No. F602 Lane's Unique Ratchet Wrench Set



Strongly made, compact and simple in operation. Ratchet handle 7 inches, two screw driver blades, extension bar 6 inches.

Six Sockets to fit all nuts and bolt heads on Ford cars, including cylinder head, from 7/16-inch to 5/8-inch.

Complete set consists of 10 pieces packed in heavy leatherette case.

No. F602.....Each, $5.00

No. 300 Interchangeable Socket Set

An inexpensive, interchangeable socket set, designed especially for individual car owner's use. 6 sockets, ½, 7/16, 5/8, 11/16, ¾, 7/8 in., all hexagonal. Heat treated. One 6-in. offset handle. Packed in carton.

No. 300. .....Each, $0.60

No. 3 Tappet Wrench Set

Made from thin special steel, heat treated, with exact opening sizes to fit nuts most commonly used on valve tappets. The set contains two each of three different size wrenches. The openings are 3/8, 7/16, ½, 9/16, 5/8 and 11/16. Put up in leatherette case.

No. 3.....Per set, $1.50

No. 1202 Special Tool Kit

Containing one each of the following tools:

1 Ball Pein Hammer, 2 Unfinished Double End Wrenches, 1 Cotter Pin Extractor, 1 Automobile Wrench, 1 Electrician's Round Shank Screw Driver, 1 Adjustable Combination Plier, 1 3/8-inch Punch, 1 3/8-inch Chisel, 1 Spark Plug Socket Wrench. Packed in canvas roll.

No. 1202.....Each, $4.10

No. 910 Special Tool Kit

Consists of seven pieces as follows: 9-inch Black Automobile Wrench, 3-inch Electrician's Round Shank Screw Driver, 6-inch Black Combination Pliers, 6-inch Drop-Forged Semi-finished Wrench, 5-inch Offset Screw Driver, 8-ounce Ball Pein Hammer, ⅜-inch Cold Chisel. Packed in canvas roll.

No. 910—Set Complete.....Each, **$4.10**

"Han-D" Wrench Sets

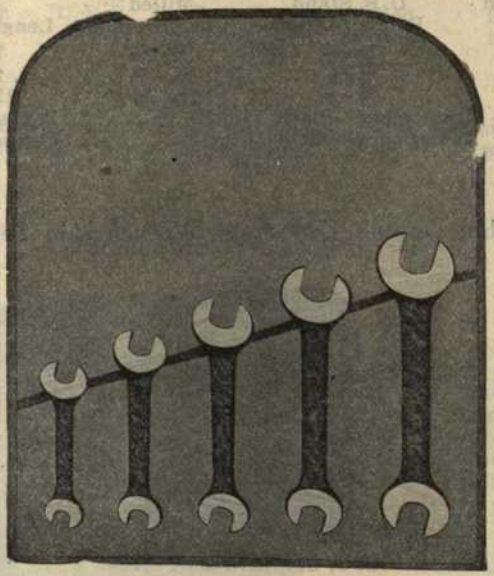
Six wrenches in one. Made of best grade steel, carefully tempered and properly case hardened.

The "Han-D" Wrench Set has 12 openings from ⅜-inch to ¾-inch. A knurled thumb-screw holds wrenches together when not in use. These strong wrenches are only ⅛ inch thick and can be used in many difficult places. Largest wrench is 7 inches long and the smallest 5⅛ inches long.

No. 40.....Each, **$1.40**

Packed 1 set in a box.

Special Engineers' Wrench Sets



This Set consists of one each of the following semi-finished drop-forged, double-end Engineers' Wrenches. Put up in substantial canvas roll:

No.	Milled Openings, ins.	For U. S. Stand. Nuts. Size Bolts	Extreme length, ins.	Thickness of Heads
23	13/32 and ½	7/16 and ¼	4	¼
25	½ and 17/32	¼ and 5/16	4⅞	5/32
27	17/32 and 11/16	5/16 and ⅜	5⅞	7/32
29	11/16 and 35/64	⅜ and 7/16	6⅞	11/64
31	35/64 and ⅞	7/16 and ½	7¾	13/64

No. 2331 Assortment.....Per set, **$2.90**

Popular General Purpose Wrenches

SETS OR OPEN STOCK

Set consists of five drop-forged, open-end Wrenches, with openings ranging from ⅜ to 1 inch. Put up in wood boxes with sliding cover, cardboard boxes or canvas rolls. Also furnished separately from open stock. Carried in either unfinished, semi-finished or full finished.

Wood Boxes

No. 10 Assortment—Unfinished.....Per set, **$2.50**
No. 11 Assortment—Semi-finished.....Per set, **$3.30**
No. 12 Assortment—Finished.....Per set, **$4.30**

Cardboard Boxes

No. 010 Assortment—Unfinished.....Per set, **$2.10**
No. 011 Assortment—Semi-finished.....Per set, **$3.00**
No. 012 Assortment—Finished.....Per set, **$4.10**

Canvas Rolls

No. 10R Assortment—Unfinished.....Per set, **$3.60**
No. 11R Assortment—Semi-finished.....Per set, **$4.40**
No. 12R Assortment—Finished.....Per set, **$5.50**

Open Stock

Wrench No.	Milled open'gs, ins.	Length, ins.	Thickness of heads, ins.	Each, Un-fin.	Each, Semi-fin.	Each Fin.
100	⅜x7/16	6¼	7/32	.18	.27	.38
101	½x9/16	7⅛	¼	.23	.34	.47
102	5/8x11/16	8¼	5/16	.29	.43	.58
103	¾x13/16	9¼	⅜	.38	.55	.72
104	⅞x1	10⅜	7/16	.50	.70	.90

Billings & Spencer Drop Forged Wrench Assortments

Light Service Wrenches in Sets

Hex. and Sq. Head Cap Screw Sizes

In Canvas Roll

Consisting of one each the following Billings & Spencer Drop Forged Wrenches assembled in canvas roll:

Wrench No.	Size Cap Screw Hex. Head	Sq. Head	Milled Opening, ins.	Length, ins.	Thickness of head, ins.
2001	3/16-5/16	1/4-3/8	3/8-1/2	6 1/4	7/32
2009	5/16-7/16	3/8-1/2	1/2-5/8	7 1/8	1/4
2018	7/16-1/2	1/2-5/8	5/8-3/4	8 1/4	9/32
2026	1/2-5/8	5/8-3/4	3/4-7/8	9 1/4	3/8
2035	5/8-3/4	.....	7/8-1	10 3/8	7/16

No. 3S Assortment—Black Finish.....Per set, 5.48

In Pasteboard Box

Consisting of one each the following Billings & Spencer Drop Forged Wrenches assembled in pasteboard box:

Wrench No.	Size Cap Screw Hex. Head	Sq. Head	Milled Opening, ins.	Length, ins.	Thickness of head, ins.
2001	3/16-5/16	1/4-3/8	3/8-1/2	6 1/4	7/32
2009	5/16-7/16	3/8-1/2	1/2-5/8	7 1/8	1/4
2018	7/16-1/2	1/2-5/8	5/8-3/4	8 1/4	9/32
2026	1/2-5/8	5/8-3/4	3/4-7/8	9 1/4	5/16
2035	5/8-3/4	.....	7/8-1	10 3/8	7/16

No. 3BS Assortment—Black Finish. . . . . Per set, 4.58
No. 3BF Assortment—Nickel Finish. . . . . Per set, 6.10

Double-End Engineers' Wrenches in Sets

S. A. E. Standard Sizes

Consisting of one each the following Billings & Spencer drop forged Wrenches assembled in canvas roll:

Wrench No.	S. A. E. Std. Bolt or Screw, ins.	Milled Openings, ins.	Length, ins.	Thickness heads, ins.
1105	1/4-5/16	3/8- 1/2	4 1/2	5/32
1118X	3/8-7/16	5/16- 11/16	6	11/32
1126	1/2-5/8	3/4- 7/8	8	7/16
1132X	5/8-11/16	15/16-1	9	15/32
1140X	3/4-7/8	1 1/16-1 1/4	11 1/2	13/32

No. 8F Assortment—Nickel Finish.....Per set, 8.32

Light Service Wrenches in Sets

S. A. E. Standard Sizes

Consisting of one each the following Billings & Spencer Drop Forged Wrenches assembled in canvas roll:

Wrench No.	S. A. E. Std. Nuts, size bolts, ins.	Milled openings, ins.	Length, ins.	Thickness of heads, ins.
2001	1/4-5/16	3/8- 1/2	6 1/4	7/32
2013	3/8-7/16	5/16- 11/16	8 1/4	5/16
2026	1/2-9/16	3/4- 7/8	9 1/4	3/8
2038	5/8-11/16	15/16-1	10 3/8	7/16
2044	3/4-7/8	1 1/16-1 1/4	12	1/2

No. 2S Assortment—Black Finish .....Per set, 7.40
No. 2F Assortment—Nickel Finish .....Per set, 9.46

U. S. Standard Bolt Sizes

Consisting of one each the following Billings & Spencer Drop Forged Wrenches assembled in canvas roll:

Wrench No.	U. S. Stand. Bolt size, ins.	Milled Opening, ins.	Length, ins.
2009	1/4-5/16	1/2- 5/8	7 1/8
2026	3/8-1/2	3/4- 7/8	9 1/4
2043	5/8-3/4	1 1/16-1 1/4	12

No. 1S Assortment—Black Finish. . . . . Per set, 4.68
No. 1F Assortment—Nickel Finish. . . . . Per set, 5.88

Thin Double End Auto Wrenches in Sets

U. S. Standard Bolt Sizes

Consisting of one each the following Billings & Spencer drop forged Wrenches assembled in canvas roll:

Wrench No.	U. S. Stand. Bolt, ins.	Milled openings, ins.	Length, ins.	Thickness heads, ins.
1350	5/16-1/4	13/32-1/2	4 1/2	5/32
1352	1/4-5/16	1/2-29/32	4 1/2	7/32
1354	5/16-3/8	13/32-11/16	5 1/2	5/16
1356	3/8-7/16	11/16-29/32	7	1/2
1358	7/16-1/2	29/32-7/8	7	7/32

No. 14S Assortment—Black Finish. . . . . Per set, 4.14
No. 14F Assortment—Nickel Finish. . . . . Per set, 5.78

Billings & Spencer Drop Forged Wrench Assortments—Continued

Tappet Wrench Set

Consists of two each of the following Billings & Spencer Drop Forged Wrenches, assembled in canvas roll. For valve tappets, check nuts and adjusting screws.

Wrench No.	U. S. S. Nuts	S. A. E. Nuts	Milled Opening	Length, inches
1335	1/4	5/16-3/8	1/2-9/16	7
1336	3/8	7/16	5/8-11/16	8

No. 22B Assortment—Black Finish. . . . . Per set, 4.20
No. 22N Assortment—Nickel Finish. . . . . Per set, 5.60

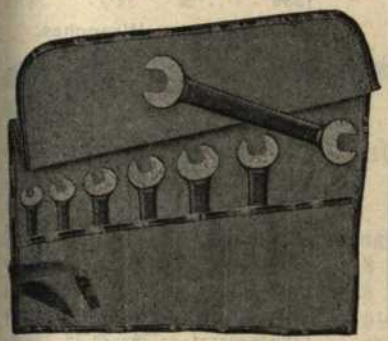
Tappet Wrench Set

Consists of two each of the following Billings & Spencer Drop Forged Wrenches assembled in canvas rolls. For valve tappets, check nuts and adjusting screws.

Wrench No.	U. S. S. Nuts	S. A. E. Nuts	Milled Opening	Length, inches
1334	1/8	1/4	5/16-7/16	6
1335	1/4	5/16-3/8	1/2-9/16	7
1336	3/8	7/16	5/8-11/16	8

No. 21B Assortment—Black Finish. . . . . Per set, 5.70
No. 21N Assortment—Nickel Finish. . . . . Per set, 7.70

Double End Wrenches in Sets

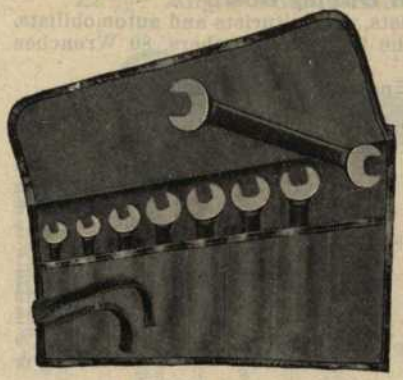


Consisting of one each of the following Billings & Spencer Drop Forged Wrenches assembled in canvas roll:

Wrench No.	Hex. Hd. Cap Screw	U.S. Stand. Nuts	Milled openings, ins.	Lgth., ins.	Thickness heads, ins.
1109	1/4	1/4	7/16- 1/2	5	5/16
1112	5/16	5/16	1/2- 9/32	5	5/16
1118X	3/8	3/8	9/16- 11/16	6	11/32
1120X	7/16	7/16	5/8- 25/32	6¾	3/8
1126	1/2	1/2	3/4- 7/8	8	7/16
1134	5/8	5/8	7/8-1 1/16	10	15/32
1139	3/4	3/4	1 -1 1/4	11½	15/32

No. 5F Assortment—Nickel Finish. . . . . Per set, 11.28

Universal Automotive Wrench Set



Consists of one each of the following Billings & Spencer Drop Forged Wrenches, assembled in canvas rolls. Fits practically all bolts, nuts, cap screws, etc., on automobiles.

Wrench No.	U. S. S. Nuts	Hex. Head Cap Sc. Size	S. A. E. Stand Screw and Nut	Milled Opening
1100	1/8	1/8-3/16	.....	5/16-3/8
1107	3/16-1/4	5/16	5/16	13/32-1/2
1110	.....	1/4-3/8	1/4-3/8	7/16-9/16
1118	5/16-3/8	.....	.....	11/32-11/16
1120	.....	7/16-1/2	7/16-1/2	5/8-3/4
1129	7/16-9/16	.....	.....	29/32-31/32
1130	1/2	9/16-5/8	9/16	13/16-7/8
1132X	.....	3/4	5/8-11/16	15/16-1

No. 23B Assortment—Black Finish. . . . . Per set, 7.32
No. 23N Assortment—Nickel Finish. . . . . Per set, 10.46

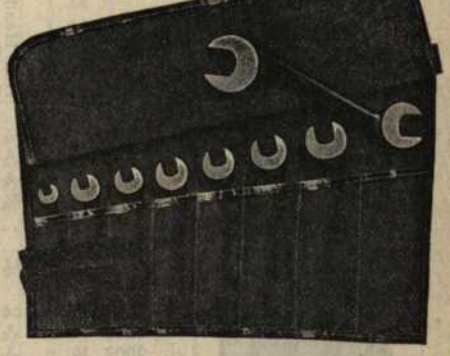
Hexagon Head Cap Screw Wrench Set

Consisting of one each the following Billings & Spencer Drop Forged Wrenches, assembled in canvas roll:

Wrench No.	Hex. Hd. Cap Screw	U. S. S. Bolt	Milled Openings	Length, inches	Thickness Head, inches
1109	1/4-5/16	.....	7/16-1/2	5	5/16
1112	.....	1/4-5/16	1/2-13/32	5	5/16
1116	3/8-7/16	.....	9/16-5/8	6	11/32
1123	.....	3/8-7/16	11/16-25/32	6¾	3/8
1125	1/2-9/16	.....	3/4-13/16	8	7/16
1132	.....	1/2-9/16	7/8-31/32	9	15/32
1133	5/8-3/4	.....	7/8-1	9	15/32
1140	.....	5/8-3/4	1 1/16-1 1/4	11½	15/32

No. 15B Assortment—Black finish. . . . . Per set, 8.78

Double End Textile Wrenches in Sets



Consisting of one of each the following Billings & Spencer Drop Forged Wrenches assembled in canvas roll:

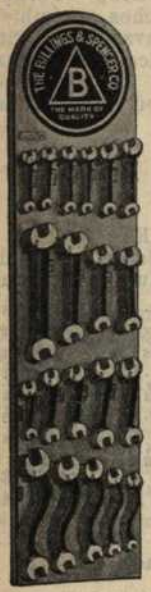
Wrench No.	Hex. Hd. Cap Screws	U. S. S. Bolt	Milled Openings	Lgth., Ins.	Thickness Head, Ins.
1557	1/4-5/16	....	7/16-1/2	4¾	1/4
1559	....	1/4-5/16	1/2-13/32	5¾	5/16
1562	3/8-7/16	....	9/16-5/8	5¾	5/16
1566	....	3/8-7/16	11/16-25/32	7	11/32
1568	1/2-9/16	....	3/4-13/16	7	11/32
1574	....	1/2-9/16	7/8-31/32	8¼	3/8
1575	5/8-3/4	....	7/8-1	9½	7/16
1580	....	5/8-3/4	1 1/16-1 1/4	11	1/2

No. 44S Assortment—Black finish . . . . . Per set, 9.16
No. 44F Assortment—Nickel finish . . . . . Per set, 12.86

Billings & Spencer Wrench Display Boards

No. 8 Display Board

Arranged for machinists, agriculturists and automobilists. Containing 4 each of the following numbers, 80 Wrenches in all:



Engineers' Wrenches, 15° Angle

No.	U. S. S. Bolt Size	Hex. Head Cap Screw Size	Milled Openings
1107	3/16-1/4	.....	13/32-1/2
1109	.....	1/4-5/16	7/16-1/2
1111	.....	5/16-3/8	1/2-9/16
1112	1/4-5/16	.....	1/2-19/32
1117	.....	3/8-1/2	9/16-3/4
1118	5/16-3/8	.....	19/32-11/16
1121	.....	7/16-7/16	5/8-13/32
1123	3/8-7/16	.....	11/16-25/32
1128	7/16-1/2	.....	25/32-7/8
1136	9/16-5/8	.....	31/32-1 1/16

Textile Wrenches, 22½° Angle

No.	U. S. S. Bolt Size	Hex. Head Cap Screw Size	Square Hd. Cap Screw Size	Milled Openings
1557	.....	1/4-5/16	5/16-3/8	7/16-1/2
1559	1/4-5/16	.....	.....	1/2-19/32
1562	.....	3/8-7/16	7/16-1/2	9/16-5/8
1566	3/8-7/16	.....	.....	11/16-25/32
1568	.....	1/2-9/16	.....	3/4-13/16

Light Service "S" Wrenches.

No.	Hex. Head Cap Screw Size	Square Head Cap Screw Size	Milled Openings
2000	3/16-1/4	1/4-5/16	3/8-7/16
2007	5/16-3/8	3/8-7/16	1/2-9/16
2017	.....	1/2-9/16	5/8-11/16
2025	1/2-9/16	.....	3/4-13/16
2035	5/8-3/4	.....	7/8-1

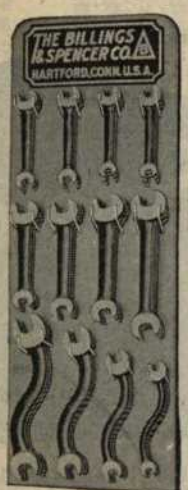
Board and wrenches are packed separately in cartons. Hooks are permanently fastened and the board is ready for the dealer's immediate use.

No. 8 Board—Complete with wrenches listed above, black finish . . . . . Each, 59.28

No. 8 Board—Complete with wrenches listed above, nickel finish . . . . . Each, 86.48

Weight complete, 71 lbs.

No. 10 Display Board



Contains three each of the following numbers, 36 wrenches in all:

Engineers' Wrenches, 15° Angle

No.	U. S. S. Bolt Size	Hex. Head Cap Screw Size	Size Screw S. A. E. Hd. and Nut	Milled Openings
1107	3/16 1/4	.. 5/16	.. 5/16	13/32 1/2
1109	.. 1/4	1/4 5/16	1/4 5/16	7/16 1/2
1111	1/4 ..	5/16 3/8	5/16 3/8	1/2 9/16
1112	1/4 5/16	5/16 ..	5/16 ..	1/2 19/32
1116	.. ..	3/8 7/16	3/8 7/16	9/16 5/8
1118	5/16 3/8	.. ..	.. ..	19/32 11/16
1123	3/8 7/16	.. ..	.. ..	11/16 25/32
1126	.. 1/2	1/2 5/8	1/2 9/16	3/4 9/16

Light Service "S" Wrenches.

2000	.. ..	3/16	1/4	..	1/4	3/8 7/16
2007	1/4 ..	7/16	3/8	7/16	3/8	1/2 9/16
2017	.. 3/8	7/16	..	7/16	..	5/8 11/16
2025	.. ..	1/2	9/16	1/2	..	3/4 13/16

Board and Wrenches are packed together in pasteboard carton suitable for parcel post shipping.

Hooks are permanently fastened and the board is ready for the dealer's use.

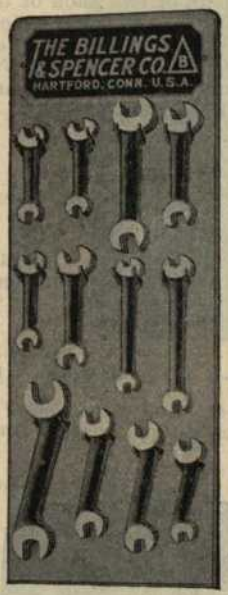
No. 10 Board—Complete with Wrenches listed above, black finish . . . . . Each, 22.94

No. 10 Board—Complete with Wrenches listed above, nickel finish . . . . . Each, 34.62

Weight complete 20 lbs.

No. 11 Display Board

Contains 3 each of the following numbers, 36 wrenches in all:



Thin Head Check Nut or Tappet Wrenches, 15° Angle

No.	Hex. Head Cap Screw Size	Size Screw S. A. E. Hd. and Nut	Milled Openings
1325	3/16-1/4	..-1/4	3/8-7/16
1326	1/4-5/16	1/4-5/16	7/16-1/2
1327	5/16-3/8	5/16-3/8	1/2-9/16
1328	3/8-7/16	3/8-7/16	9/16-5/8
1329	7/16-1/2	7/16-1/2	5/8-3/4
1330	1/2-5/8	1/2-9/16	3/4-7/8

Automotive Wrenches, 22½° Angle

1557	1/4-5/16	1/4-5/16	7/16-1/2
1558	5/16-3/8	5/16-3/8	1/2-9/16
1562	3/8-7/16	3/8-7/16	9/16-5/8
1570	1/2-3/4	1/2-11/16	3/4-1

Long Thin Head Tappet Wrenches, 15° Angle

No.	U. S. S. Nuts	S. A. E. Nuts	Milled Openings
1335	1/4-..	5/16-3/8	1/2-9/16
1336	..-3/8	7/16-..	5/8-11/16

Board and Wrenches are packed together in pasteboard carton suitable for parcel post shipping.

Hooks are permanently fastened and the board is ready for the dealer's immediate use.

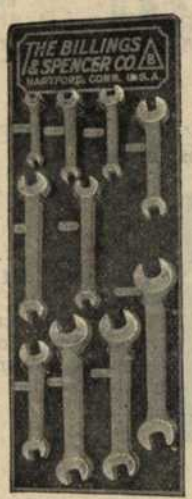
No. 11 Board—Complete with Wrenches listed above, black finish . . . . . Each, 24.66

No. 11 Board—Complete with Wrenches listed above, nickel finish . . . . . Each, 36.36

Weight complete, 14 lbs.

No. 21-23 Display Board

Contains 6 each of Tappet Wrenches and 3 each of Automotive Wrenches—42 wrenches in all.



Long Thin Head Tappet Wrenches, 15° Angle, Double Head.

No.	U. S. S. Nuts	S. A. E. Nuts	Milled Openings
1334	1/8-..	..-1/4	5/16-7/16
1335	1/4-..	5/16-3/8	1/2-9/16
1336	..-3/8	7/16-..	5/8-11/16

Automotive Wrenches, 15° Angle

No.	U. S. S. Bolt Size	Hex. Head Cap Sc. Size	S. A. E. Standard Screw & Nut	Milled Openings
1100	1/8-..	1/8-3/16	.....	5/16-3/8
1107	3/16-1/4	..-1/4	..-5/16	13/32-1/2
1110	.....	1/4-3/8	1/4-3/8	7/16-9/16
1118	5/16-3/8	.....	.....	19/32-11/16
1120	.....	7/16-1/2	7/16-1/2	5/8-3/4
1129	7/16-5/8	.....	.....	25/32-31/32
1130	..-1/2	9/16-5/8	..-5/8	11/16-7/8
1132x	.....	..-3/4	5/8-11/16	15/16-1

Board and Wrenches are packed together in pasteboard carton, suitable for parcel post shipping.

Hooks are permanently fastened and the board is ready for the dealer's use.

No. 21-23 Board—Complete with Wrenches listed above, black finish . . . . . Each, 33.00

No. 21-23 Board—Complete with Wrenches listed above, nickel finish . . . . . Each, 48.30

Weight complete 24 lbs.

A printed card is furnished with each Board, showing list prices as a guide in figuring resale prices.

Billings & Spencer Drop Forged Wrenches

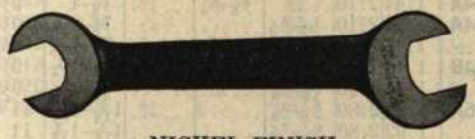
Light Service Wrenches

For automobiles, carriage makers and general use. A light, handy, but strong, powerful and well-balanced wrench.

B. & S. Number	Williams' Number	List, Each, Black	List, Each, Nickel	Hex. Head, Cap. Sc. Size	Sq. Head, Cap. Sc. Size	Milled Opening	Extreme Length	Thickness of Head
2000	75B	.54	.76	3/16–1/4	1/4–5/16	3/8–7/16	6 1/4	7/32
2001	75A	.54	.76	1/4–5/16	1/4–3/8	3/8–1/2	6 1/4	7/32
2007	77B	.68	.94	5/16–3/8	3/8–7/16	1/2–9/16	7 1/8	1/4
2009	77	.68	.94	5/16–7/16	3/8–1/2	1/2–5/8	7 1/8	1/4
2013	79A	.86	1.16	.....	7/16–9/16	9/16–11/16	8 1/4	5/16
2017	79	.86	1.16	.....	1/2–9/16	5/8–11/16	8 1/4	5/16
2018	.....	.86	1.16	7/16–1/2	1/2–5/8	5/8–3/4	8 1/4	5/16
2025	81B	1.10	1.44	1/2–9/16	.....	3/4–13/16	9 1/4	3/8
2026	81A	1.10	1.44	1/2–5/8	5/8–3/4	3/4–7/8	9 1/4	3/8
2033	.....	1.40	1.80	.....	.....	7/8–15/16	10 3/8	7/16
2035	83B	1.40	1.80	5/8–3/4	.....	7/8–1	10 3/8	7/16
*2038	83A	2.00	2.60	.....	.....	15/16–1	12	1/2
2043	85C	2.00	2.60	.....	.....	1 1/16–1 1/4	12	1/2
2044	85B	2.00	2.60	7/8–1	7/8–1	1 1/8–1 1/4	12	1/2

*No. 2038 Sp. is for use on 5/8-3/4 SAE Cap Screws.

15° Angle Double-End Wrenches



NICKEL FINISH

For SAE standard Hexagon Head Cap Screws and Nuts.

B. & S. Nos.	Williams Nos.	List, Each	S. A. E. Std. Bolt or Screw	Milled Openings	Length	Thickness of Heads
1118X	27C	.92	3/8	9/16–11/16	6	11/32
1132X	33	1.70	5/8–11/16	13/16–1	9	13/32
1136X	35	2.16	5/8–3/4	15/16–1 1/16	10	13/32
1140X	37	2.80	7/8	1 1/8–1 1/4	11 1/2	13/32

Structural Wrenches

The round tang is for bringing bolt or rivet holes into line. Milled, heads case - hardened, but not ground.

STRAIGHT OPENING, OFFSET HEAD, BLACK FINISH

No.	List Each	Milled Openings	Length	Thickness Head	Handle Offset
1700	.80	17/32	8	3/8	11/16
1701	.80	5/8	8	3/8	11/16
1702	1.04	23/32	9 1/2	7/16	7/8
1703	1.04	13/16	9 1/2	7/16	7/8
1704	1.40	23/32	11 3/4	1/2	1
1705	1.40	1	11 3/4	1/2	1
1706	1.96	1 7/32	13 1/2	5/8	1 1/8
1707	2.68	1 13/32	15 1/2	11/16	1 1/4
1708	3.60	1 1/2	17	3/4	1 5/16
1709	5.00	1 11/16	19	13/16	1 3/8

22½° Angle Double-End "S" Wrenches

A very serviceable series of "S" wrenches. Will stand hard service.

BLACK FINISH

B. & S. Number	Williams' Number	List, Each	U. S. Standard Bolt Size	Hex. Head, Cap. Sc. Size	Milled Opening	Length	Thickness of Head
1400	661D	.44	.....	1/8–3/16	5/16–3/8	4	7/32
1401	661A	.44	1/8–3/16	.....	5/16–13/32	4	7/32
1402	661E	.44	.....	1/8–1/4	5/16–7/16	4	7/32
1403	661B	.44	1/8–1/4	.....	5/16–1/2	4	1/4
1404	661F	.44	.....	3/16–1/4	3/8–7/16	4	1/4
1405	661G	.44	.....	1/4–5/16	3/8–1/2	4	1/4
1406	.....	.44	.....	3/16–3/8	3/8–9/16	4	1/4
1407	661C	.44	3/16–1/4	.....	13/32–1/2	4	1/4
1408	662A	.58	3/16–5/16	.....	13/32–19/32	5	5/16
1409	662D	.58	.....	1/4–5/16	7/16–1/2	5	5/16
1410	662E	.58	.....	1/4–3/8	7/16–9/16	5	5/16
1411	662F	.58	.....	5/16–3/8	1/2–9/16	5	5/16
1412	662B	.58	1/4–5/16	.....	1/2–13/32	5	5/16
1413	662G	.58	.....	5/16–7/16	1/2–5/8	5	5/16
1414	662C	.58	1/4–3/8	.....	1/2–11/16	5	5/16
1415	.....	.58	.....	5/16–1/2	1/2–3/4	5	5/16
1416	663D	.78	.....	3/8–7/16	9/16–5/8	6 1/4	3/8
1417	663E	.78	.....	3/8–1/2	9/16–3/4	6 1/4	3/8
1418	663A	.78	5/16–3/8	.....	13/32–11/16	6 1/4	3/8
1419	663B	.78	5/16–7/16	.....	13/32–25/32	6 1/4	3/8
1420	663F	.78	.....	7/16–1/2	5/8–3/4	6 1/4	3/8
1421	663G	.78	.....	5/16–5/16	5/8–13/16	6 1/4	3/8
1422	.....	.78	.....	7/16–5/8	5/8–7/8	6 1/4	3/8
1423	663C	.78	3/8–7/16	.....	11/16–29/32	6 1/4	3/8
1424	664A	1.06	3/8–1/2	.....	11/16–7/8	7 1/2	7/16
1425	664D	1.06	.....	1/2–9/16	3/4–13/16	7 1/2	7/16
1426	664E	1.06	.....	1/2–5/8	3/4–7/8	7 1/2	7/16
1427	.....	1.06	.....	1/2–3/4	3/4–1	7 1/2	7/16
1428	664B	1.06	7/16–1/2	.....	25/32–7/8	7 1/2	7/16
1429	664C	1.06	7/16–9/16	.....	25/32–31/32	7 1/2	7/16
1430	664F	1.06	.....	9/16–5/8	15/16–1/8	7 1/2	7/16
1431	665D	1.44	.....	9/16–3/4	13/16–1	9	1/2
1432	665A	1.44	1/2–9/16	.....	7/8–31/32	9	1/2
1433	665E	1.44	.....	5/8–3/4	7/8–1	9	1/2
1434	665B	1.44	1/2–5/8	.....	7/8–1 1/16	9	9/16
1435	665F	1.44	.....	5/8–7/8	7/8–1 1/8	9	9/16
1436	665C	1.44	9/16–5/8	.....	31/32–1 1/16	9	9/16
1437	666A	2.00	9/16–3/4	.....	31/32–1 1/4	10 1/2	9/16
1438	665G	2.00	.....	3/4–7/8	1 –1 1/8	10 1/2	9/16
1439	666D	2.00	.....	3/4–1	1 –1 1/4	10 1/2	9/16
1440	666B	2.00	5/8–3/4	.....	1 1/16–1 1/4	10 1/2	9/16
1441	666C	2.00	5/8–7/8	.....	1 1/16–1 1/16	10 1/2	9/16
1442	666E	2.00	.....	7/8–1	1 1/8–1 1/4	10 1/2	9/16
1443	666F	2.00	.....	7/8–1 1/8	1 1/8–1 3/8	10 1/2	9/16
1444	667D	2.90	.....	1 –1 1/8	1 1/4–1 3/8	12*	5/8
1445	667A	2.90	3/4–7/8	.....	1 1/4–1 7/16	12	5/8
1446	667E	2.90	.....	1 –1 1/4	1 1/4–1 1/2	12	5/8
1447	667B	2.90	3/4–1	.....	1 1/4–1 5/8	12	11/16
1448	667F	2.90	.....	1 1/8–1 1/4	1 3/8–1 1/2	12	11/16
1449	667C	2.90	7/8–1	.....	1 7/16–1 5/8	12	11/16
1450	668A	5.00	7/8–1 1/8	.....	1 7/16–1 13/16	14	11/16
1451	668B	5.00	1 –1 1/8	.....	1 5/8–1 13/16	14	11/16
1452	668C	5.00	1 –1 1/4	.....	1 5/8–2	14	11/16
1453	.....	5.00	1 1/8–1 1/4	.....	1 13/16–2	14	11/16

Williams Wrench numbers are shown for convenience of dealers owning Williams Wrench boards, for filling in stock with Billings & Spencer make. All Billings & Spencer Wrenches are packed six in a box.

Billings & Spencer Drop Forged Wrenches—Continued

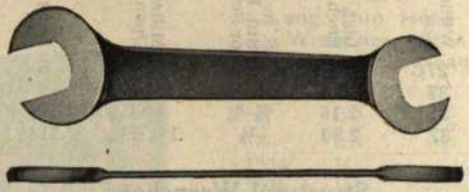
15° Angle Double-End Wrenches

B. & S. Number	Williams' Number	List, Each, Black	List, Each, Nickel	U. S. S. Bolt Size	Hex. Head Cap Sc. Size	Milled Opening	Length	Thickness of Heads
1100A	.....	.32	.46	.....	.....	1/4- 5/16	3 1/2	3/16
1100	721	.34	.52	.....	1/8- 3/16	5/16- 3/8	4	1/4
1101	21	.34	.52	1/8- 3/16	.....	5/16- 13/32	4	1/4
1102	722	.34	.52	.....	1/8- 1/4	5/16- 7/16	4	1/4
1103	22	.42	.64	1/8- 1/4	.....	5/16- 1/2	4 1/2	5/32
1104	723	.42	.64	.....	3/16- 1/4	3/8- 7/16	4 1/2	5/32
1105	723A	.42	.64	.....	3/16- 5/16	3/8- 1/2	4 1/2	5/32
1106	.....	.42	.64	.....	3/16- 3/8	3/8- 9/16	4 1/2	5/32
1107	23	.42	.64	3/16- 1/4	.....	11/32- 1/2	4 1/2	5/32
1108	24	.50	.76	3/16- 5/16	.....	11/32- 19/32	5	5/16
1109	725	.50	.76	.....	1/4- 5/16	7/16- 1/2	5	5/16
1110	725A	.50	.76	.....	1/4- 3/8	7/16- 9/16	5	5/16
1111	725B	.50	.76	.....	5/16- 3/8	1/2- 9/16	5	5/16
1112	25	.50	.76	1/4- 5/16	.....	1/2- 19/32	5	5/16
1113	726	.50	.76	.....	5/16- 7/16	1/2- 5/8	5	5/16
1114	26	.62	.92	1/4- 3/8	.....	1/2- 11/16	6	11/32
1115	.....	.62	.92	.....	5/16- 1/2	1/2- 3/4	6	11/32
1116	727	.62	.92	.....	3/8- 7/16	9/16- 5/8	6	11/32
1117	728	.62	.92	.....	3/8- 1/2	9/16- 3/4	6	11/32
1118	27	.62	.92	5/16- 3/8	.....	11/32- 11/16	6	11/32
1119	28	.74	1.12	5/16- 7/16	.....	19/32- 25/32	6 3/4	3/8
1120	729	.74	1.12	.....	7/16- 1/2	5/8- 3/4	6 3/4	3/8
1120X	28S	.74	1.12	.....	.....	5/8- 25/32	6 3/4	3/8
1121	730	.74	1.12	.....	7/16- 9/16	5/8- 13/16	6 3/4	3/8
1122	.....	.74	1.12	.....	7/16- 5/8	5/8- 7/8	6 3/4	3/8
1123	29	.74	1.12	3/8- 7/16	.....	11/16- 25/32	6 3/4	3/8
1124	30	.90	1.36	3/8- 1/2	.....	11/16- 7/8	8	7/16
1125	731	.90	1.36	.....	1/2- 9/16	3/4- 13/16	8	7/16
1126	731A	.90	1.36	.....	1/2- 5/8	3/4- 7/8	8	7/16
1127	.....	.90	1.36	.....	1/2- 3/4	3/4-1	8	7/16
1128	31	.90	1.36	7/16- 1/2	.....	25/32- 7/8	8	7/16
1129	32	1.10	1.70	7/16- 9/16	.....	25/32- 31/32	9	15/32
1130	731B	1.10	1.70	.....	9/16- 5/8	13/16- 7/8	9	15/32
1131	732	1.10	1.70	.....	9/16- 3/4	13/16-1	9	15/32
1132	33	1.10	1.70	1/2- 9/16	.....	7/8- 31/32	9	15/32
1133	733	1.10	1.70	.....	5/8- 3/4	7/8-1	9	15/32
1134	34	1.36	2.16	1/2- 5/8	.....	7/8-1 1/16	10	17/32
1135	734	1.36	2.16	.....	5/8- 7/8	7/8-1 1/8	10	17/32
1136	35	1.36	2.16	9/16- 5/8	.....	31/32-1 1/16	10	17/32
1137	36	1.92	2.80	9/16- 3/4	.....	31/32-1 1/4	11 1/2	17/32
1138	735	1.92	2.80	.....	3/4- 7/8	1 -1 1/8	11 1/2	19/32
1139	736	1.92	2.80	.....	3/4-1	1 -1 1/4	11 1/2	19/32
1140	37	1.92	2.80	5/8- 3/4	.....	1 1/16-1 1/4	11 1/2	19/32
1141	38	2.80	....	5/8- 7/8	.....	1 1/16-1 1/16	13 1/2	21/32
1142	737	2.80	....	.....	7/8-1	1 1/8-1 1/4	13 1/2	21/32
1143	738	2.80	....	.....	7/8-1 1/8	1 1/8-1 3/8	13 1/2	11/16
1144	.....	2.80	....	.....	7/8-1 1/4	1 1/8-1 1/2	13 1/2	11/16
1145	739	2.80	....	.....	1 -1 1/8	1 1/4-1 3/8	13 1/2	11/16
1146	39	2.80	....	3/4- 7/8	.....	1 1/4-1 7/16	13 1/2	11/16
1147	739A	2.80	....	.....	1 -1 1/4	1 1/4-1 1/2	13 1/2	11/16
1148	40	3.80	....	3/4-1	.....	1 1/4-1 5/8	16	13/16
1149	.....	3.80	....	.....	1 1/8-1 1/4	1 3/8-1 1/2	16	13/16
1150	41	3.80	....	7/8-1	.....	1 7/16-1 5/8	16	13/16
1151	42	5.30	....	7/8-1 1/8	.....	1 7/16-1 13/16	18	7/8
1152	.....	5.30	....	1	1 1/4-	1 1/2-1 5/8	18	7/8
1153	43	5.30	....	1 -1 1/8	.....	1 5/8-1 13/16	18	7/8
1154	44	7.20	....	1 -1 1/4	.....	1 5/8-2	21	1 1/16
1155	45	7.20	....	1 1/8-1 1/4	.....	1 13/16-2	21	1 1/16
1156	46	10.50	....	1 1/8-1 3/8	.....	1 13/16-2 3/16	23	1 1/8
1157	47	10.50	....	1 1/4-1 3/8	.....	2 -2 3/16	23	1 1/8
1158	48	14.00	....	1 1/4-1 1/2	.....	2 -2 3/8	24	1 3/16
1159	49	14.00	....	1 3/8-1 1/2	.....	2 3/16-2 3/8	24	1 3/16

22½° Angle Double-End Textile Wrenches

B. & S. Number	Williams' Number	List, Each, Black	List, Each, Nickel	U. S. Standard Bolt Size	Hex. Head Cap. Sc. Size	Sq. Head Cap. Sc. Size	Milled Opening	Length	Thickness of Heads
1550	.....	.34	.56	.....	.....	.....	3/16- 1/4	3 1/2	3/16
1551	.....	.34	.56	.....	.....	.....	3/16- 5/16	3 1/2	3/16
1552	.....	.50	.76	1/8-1/4	.....	.....	5/16- 1/2	4 3/4	1/4
1553	760X	.50	.76	.....	3/16-1/4	1/4-5/16	3/8- 7/16	4 3/4	1/4
1554	.....	.50	.76	.....	3/16-5/16	1/4-3/8	5/16- 1/2	4 3/4	1/4
1555	760B	.50	.76	3/16-1/4	.....	.....	11/32- 1/2	4 3/4	1/4
1556	760C	.50	.76	3/16-5/16	.....	.....	11/32- 19/32	4 3/4	1/4
1557	760Y	.50	.76	.....	1/4-5/16	5/16-3/8	7/16- 1/2	4 3/4	1/4
1558	761X	.62	.92	.....	5/16-3/8	3/8-7/16	1/2- 9/16	5 3/4	5/16
1559	761A	.62	.92	1/4-5/16	.....	.....	1/2- 19/32	5 3/4	5/16
1560	.....	.62	.92	.....	5/16-7/16	3/8-1/2	1/2- 5/8	5 3/4	5/16
1561	.....	.62	.92	1/4-3/8	.....	.....	1/2- 11/16	5 3/4	5/16
1562	761Z	.62	.92	.....	3/8-7/16	7/16-1/2	9/16- 5/8	5 3/4	5/16
1563	.....	.62	.92	.....	.....	7/16-9/16	11/16- 11/16	5 3/4	5/16
1564	761C	.62	.92	5/16-3/8	.....	.....	11/16- 11/16	5 3/4	5/16
1565	.....	.80	1.20	5/16-7/16	.....	.....	11/16- 25/32	7	11/32
1566	762B	.80	1.20	3/8-7/16	.....	.....	11/16- 25/32	7	11/32
1567	762C	.80	1.20	3/8-1/2	.....	9/16-3/4	11/16- 7/8	7	11/32
1568	.....	.80	1.20	.....	1/2-9/16	.....	3/4- 11/16	7	11/32
1569	763Y	.80	1.20	.....	1/2-5/8	5/8-3/4	3/4- 7/8	7	11/32
1570	.....	1.06	1.56	.....	1/2-3/4	.....	3/4-1	8 1/4	3/8
1571	763A	1.06	1.56	7/16-1/2	.....	.....	25/32- 7/8	8 1/4	3/8
1572	.....	1.06	1.56	7/16-9/16	.....	.....	25/32- 31/32	8 1/4	3/8
1573	.....	1.06	1.56	.....	9/16-3/4	.....	13/16-1	8 1/4	3/8
1574	763C	1.06	1.56	1/2-9/16	.....	.....	7/8- 31/32	8 1/4	3/8
1575	764X	1.44	2.10	.....	5/8-3/4	.....	7/8-1	9 1/2	7/16
1576	764A	1.44	2.10	1/2-5/8	.....	.....	7/8-1 1/16	9 1/2	7/16
1577	.....	1.44	2.10	.....	5/8-7/8	3/4-7/8	7/8-1 1/8	9 1/2	7/16
1578	764B	1.44	2.10	9/16-5/8	.....	.....	31/32-1 1/16	9 1/2	7/16
1579	.....	1.44	2.10	9/16-3/4	.....	.....	31/32-1 1/4	9 1/2	7/16
1580	765A	1.92	2.80	5/8-3/4	.....	.....	1 1/16-1 1/4	11	1/2
1581	.....	1.92	2.80	5/8-7/8	.....	.....	1 1/16-1 7/16	11	1/2
1582	.....	1.92	2.80	.....	7/8-1	7/8-1	1 1/8-1 1/4	11	1/2
1583	765C	1.92	2.80	3/4-7/8	.....	.....	1 1/4-1 7/16	11	1/2

15° Angle Check Nut Wrenches



B. & S. Number	Williams' Number	List, Each, Black	List, Each, Nickel	U. S. Standard Bolt Size	Milled Opening	Length	Thickness of Heads
1350	623	.50	.76	3/16- 1/4	11/32- 1/2	4 1/2	5/32
1351	624	.50	.76	5/16- 3/8	11/32- 19/32	4 1/2	5/32
1352	625	.50	.76	1/4- 5/16	1/2- 19/32	4 1/2	5/32
1353	626	.64	.96	1/4- 5/16	1/2- 11/16	5 1/2	3/16
1354	627	.64	.96	5/16- 3/8	19/32- 11/16	5 1/2	3/16
1355	628	.64	.96	5/16- 3/8	11/32- 25/32	5 1/2	3/16
1356	629	.80	1.20	3/8- 7/16	11/16- 25/32	7	7/32
1357	630	.80	1.20	3/8- 1/2	11/16- 7/8	7	7/32
1358	631	.80	1.20	7/16- 1/2	25/32- 7/8	7	7/32
1359	632	1.12	1.60	1/2- 9/16	25/32- 31/32	8 1/2	1/4
1360	633	1.12	1.60	1/2- 9/16	7/8- 31/32	8 1/2	1/4
1361	634	1.12	1.60	1/2- 5/8	7/8-1 1/16	8 1/2	1/4
1362	635	1.68	2.30	9/16- 5/8	31/32-1 1/16	10 1/2	9/32
1363	636	1.68	2.30	9/16- 3/4	31/32-1 1/4	10 1/2	9/32
1364	637	1.68	2.30	5/8- 3/4	1 1/16-1 1/4	10 1/2	9/32
1365	638	2.60	3.50	5/8- 7/8	1 1/16-1 7/16	12 1/2	11/32
1366	639	2.60	3.50	3/4- 7/8	1 1/4-1 7/16	12 1/2	11/32
1367	640	2.60	3.50	3/4-1	1 1/4-1 5/8	12 1/2	11/32

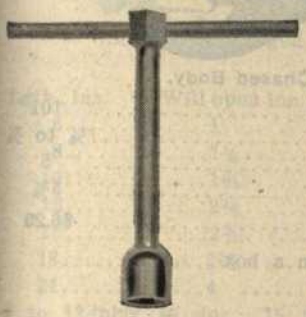
Williams Wrench numbers are shown for convenience of dealers owning Williams Wrench boards, for filling in stock with Billings & Spencer make. All Billings & Spencer Wrenches are packed six in a box.

Billings & Spencer Drop Forged Wrenches—Continued

Williams Wrench numbers are shown for convenience of dealers owning Williams Wrench boards, for filling in stock with Billings & Spencer make. All Billings & Spencer Wrenches are packed six in a box.

T Handle Socket Wrenches

SEMI-FINISHED.



For Hexagon Nuts and Cap Screws

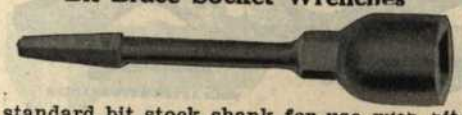
Broached, edges ground and case-hardened all over.

Openings of U. S. Standard dimensions; special broaching to order in reasonable quantities.

Hexagon end of shank is designed for use in combination with another wrench or with Pin Handle.

B. & S. Nos.	Williams Nos.	List, Each	U. S. S. Bolt	Cap Screw	Broached Opening	Ext. Length	Dia. Head	Length Handle
721A	961A	.80	1/8	...	11/64	4	1/2	4
722A	962D	.88	...	5/16	13/64	4 1/2	5/8	4 1/2
722B	963A	.98	5/16	...	17/64	4 1/2	5/8	4 1/2
722C	963D	.98	...	1/4	13/64	4 1/2	5/8	4 1/2
723A	964A	1.04	1/4	5/16	13/64	5 1/4	3/4	5 1/4
724A	965D	1.16	...	3/8	17/64	5 3/4	7/8	5 3/4
724B	965A	1.16	5/16	...	13/64	5 3/4	7/8	5 3/4
725A	966D	1.26	...	7/16	11/32	6 1/8	1	6 1/8
725B	967A	1.42	3/8	...	13/64	6 1/8	1 1/8	6 1/8
725C	967D	1.42	...	1/2	13/64	6 1/8	1 1/8	6 1/8
726A	968A	1.54	7/16	...	21/64	7	1 1/4	7
726B	968D	1.54	...	9/16	23/64	7	1 1/4	7
726C	969A	1.74	1/2	5/8	27/64	7	1 1/4	7
727A	970A	1.96	9/16	...	23/64	7 7/8	1 1/2	7 7/8
727B	970D	1.96	...	3/4	1 3/64	7 7/8	1 1/2	7 7/8
728A	971A	2.20	5/8	...	1 5/64	8 5/8	1 5/8	8 5/8
728B	972D	2.60	...	7/8	1 9/32	8 5/8	1 5/8	8 5/8
729A	973A	3.00	3/4	1	1 9/32	9 1/8	1 7/8	9 1/8

Bit Brace Socket Wrenches



Have standard bit stock shank for use with bit-brace or handle designed especially for the purpose.

For Hexagon Nuts and Cap Screws.

No.	List Each Semi-Finished	Each Finished	U. S. Bolt	Cap Screw	Broached Opening	Ext. Length	Diam. Head
921A	.80	1.00	1/8	1/8	11/64	4	17/32
922A	.88	1.10	..	5/16	13/64	4 1/2	11/16
922B	.98	1.22	5/16	..	17/64	4 1/2	11/16
922C	.98	1.22	..	1/4	13/64	4 1/2	11/16
923A	1.04	1.30	1/4	5/16	13/64	4 3/4	23/32
924A	1.16	1.44	..	3/8	17/64	5 1/4	25/32
924B	1.16	1.44	5/16	..	13/64	5 1/4	25/32
925A	1.26	1.58	..	7/16	11/32	5 1/2	1
925B	1.42	1.78	3/8	..	13/64	5 3/4	1 1/8
925C	1.42	1.78	..	1/2	13/64	5 3/4	1 1/8
926A	1.54	1.94	7/16	..	21/64	5 3/4	1 1/8
926B	1.54	1.94	..	9/16	23/64	6	1 7/32
926C	1.74	2.20	1/2	5/8	27/64	6	1 7/32

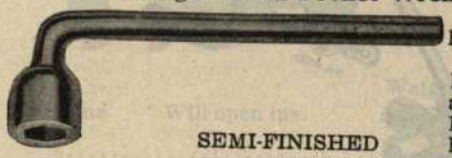
Socket Wrench Handles

This Handle is an Open Hearth steel drop forging, finished in black lacquer. It has two openings that will fit any standard bit.

Handle length, 6 inches.

No. 921.....Each, 1.20

Single Head Socket Wrenches



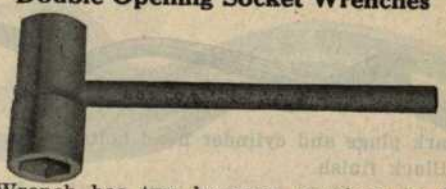
For Hexagon heads and nuts.

Have bent handles at right angle to head for hexagon nuts and hexagon heads.

SEMI-FINISHED

B. & S. Nos.	Williams Nos.	List, Each	Cap Screw	Broached Opening	Face of Wrench to Handle	Diam. Head	Handle Length	Handle Diam.
822C	263D	.72	1/4	11/64	11/16	5/8	4	3/8
823A	264A	.78	5/16	13/64	1 1/4	3/4	4 3/4	3/8
824A	265D	.88	3/8	17/64	1 5/16	7/8	5 1/2	7/16
825A	266D	.96	7/16	11/32	1 11/16	1	6 1/4	1/2
825C	267D	1.08	1/2	13/64	1 3/4	1 1/8	7	1/2
826C	269A	1.38	5/8	27/64	2	1 1/4	7 3/4	5/8
827B	270D	1.56	3/4	1 3/64	2 1/16	1 1/2	8 1/2	11/16

Double Opening Socket Wrenches



Each Wrench has two hexagon openings in the head, making a set of six openings in S. A. E. Standard sizes.

No.	List Each	S. A. E. Screw Sizes	Broached Openings	Length ins.
800	1.00	1/4, 3/8	1/2, 9/16	6
801	1.10	7/16, 1/2	11/16, 3/4	7
802	1.20	1/4, 5/8	7/8, 11/16	8

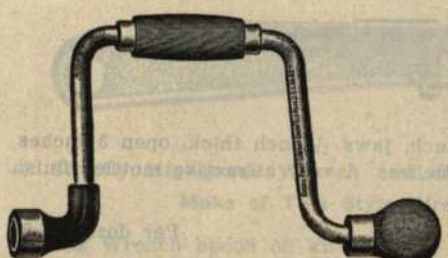
Spark Plug Wrenches

BLACK FINISH

This wrench has a box end exactly fitting the plug, and placed at an offset which accommodates it to all kinds of cylinder heads.

No. 810—Box end, 7/8 in.; open end, 9/16 in.....Each, 1.16
No. 811—Box end, 1 in.; open end, 9/16 in.....Each, 1.16
No. 812—Box end, 1 1/8 in.; open end, 5/8 in.....Each, 1.36

Goodell-Pratt Rim Wrench



A high grade tool, made for service. Has a 10-inch forged steel sweep which is polished and nickel plated. Furnished with Hexagon Socket. Packed six in box.

No.	Socket Size	Each
82A	5/8	$2.10
82B	11/16	$2.10
82C	3/4	$2.10
82D	7/8	$2.10

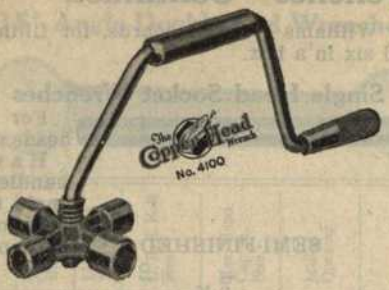
Universal Rim Wrench

Will remove all nuts used in connection with demountable rims; can be used for many other purposes.

It is a socket wrench set in itself, and is adjusted automatically.

Universal Rim Wrench.....Each, $2.60

Copperhead Universal Rim-Bolt Wrench



Triple plated with copper and lacquered, making them rust-proof. Combines four wrenches into one. Instantly accessible socket. A socket for any standard rim bolt made.

No. 4100.....Each, $5.00

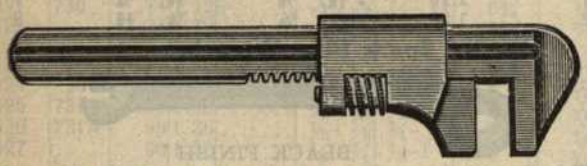
Spark Plug Wrench

For Ford

Fits spark plugs and cylinder head bolts on Ford. Drop forged. Black finish.

No. 2335B.....Each, $0.60

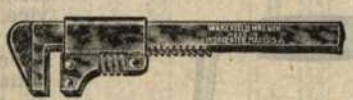
No. 109 Adjustable Auto Wrench



9-inch. Made from extra tough cast steel. Will stand up under rough usage. Black finish.

No. 109.....Per doz., $5.50

No. B9 Adjustable Auto Wrench



An all steel wrench, jaws $\frac{1}{16}$ inch thick, open 3 inches, length over all 9 inches. A very attractive mottled finish wrench.

No. B9.....Per doz., $16.80

Deering Style Malleable Wrenches

7 inches long. 6 openings, $\frac{3}{8}$ to $\frac{7}{8}$ inch. Natural finish. Weight, 7½ lbs. per dozen.

No. 67.....Per doz., $1.60

Always Ready Wrenches

Natural Finish Chased Body.

Number	101
Holds nuts on pipe, ins.	¼ to ¾
Length, ins.	5
Weight per dozen, lbs.	5¾
Per dozen	$6.20

½ dozen in a box.

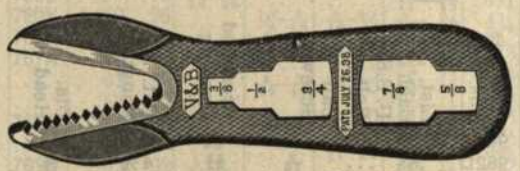


Illustration shows No. 13.

Number	12	13
Holds pipe, ins.	⅛ to ⅜	⅛ to 1
Holds round iron, ins.	¼ to ¾	⅜ to 1¼
Length, ins.	5½	7
Weight per dozen, lbs.	4½	9¼
Per dozen	$4.10	$7.50

No. 12, 1 dozen, No. 13, ½ dozen in a box.

Saxon Wrenches

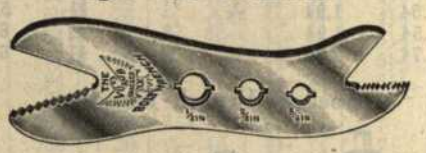
The dies will recut three sizes of bolts, $\frac{1}{16}$ in. x 18 thread, $\frac{3}{8}$ in. x 16 thread and ½ in. x 13 thread. These are the sizes commonly used on harvesting and agricultural machinery.

The dies are countersunk on one side so they will run on to bolts that have been battered on the end, and recut the thread so the nuts will run on again. Weight, 10½ lbs. per dozen.

No. 714.....Per doz., $7.20

½ dozen in a box.

Eagle Bolt Wrenches



Extra warranted steel, milled teeth, oil tempered, designed especially for use on bolts. Black finish.

Will rethread bolts $\frac{1}{16}$, $\frac{3}{8}$, ½ in.

Number	200
Holds round iron, ins.	¼ to ⅞
Length, ins.	6
Weight per dozen, lbs.	4¼
Per dozen	$5.80

1 dozen in a box.

Knife Handle Monkey Wrenches

Solid Drop-Forged One-Piece Steel Bar.

Lgth., ins.	Will open ins.	Weight doz., lbs.	Per doz.
6	1	10	15.00
8	1¼	17	18.00
10	1¾	31	22.00
12	2⅛	43	28.00
15	2¾	64	38.00
18	3⅛	100	48.00
21	4	155	58.00

6 to 12-inch, ½ doz.; 15 to 18-inch, ⅓ doz. in a box; 21-inch, packed 1 in a box.

Coes' Monkey Wrenches

Lgth., ins.	Will open ins.	Weight doz., lbs.	Per doz.
6	⅞	9	15.00
8	1¼	16	18.00
10	1⅝	26	22.00
12	2¼	40	28.00
15	2½	58	38.00
18	3	79	48.00
21	4	107	58.00

6 to 12-inch, ½ doz. Larger ⅓ doz. in a package.

Coes' All Steel Monkey Wrenches

Lgth., ins.	Will open ins.	Weight doz., lbs.	Per doz.
6	⅞	9½	15.00
8	1¼	17	18.00
10	1¾	27	22.00
12	2⅜	45	28.00
15	2⅝	64	38.00
18	3	90	48.00
21	4	122	58.00

6 to 12-inch, ½ doz. Larger ⅓ doz. in a package.

No. 46—B. & C. Combination Wrenches**

Long Nut, Black Finish

Lgth., ins.	Holds pipe, ins.	Weight doz., lbs.	Per doz.
10	¼ to 1	26	$ 60.00
12	½ to 1¾	40	$ 72.00
15	½ to 2¼	55	$ 96.00
18	½ to 3	87	$174.00

10, 12, 15-inch, ½ doz.; 18-inch, 1-6 doz. in a package.

Agricultural Monkey Wrenches

Lgth., ins.	Will open ins.	Weight doz., lbs.	Per doz.
6	1	9	10.00
8	1 5/16	15	12.00
10	1 13/16	22	14.00
12	2	28	18.00
15	2¼	42	24.00

½ dozen in a package.

No. 48—B. & C. Adjustable "S" Wrenches**

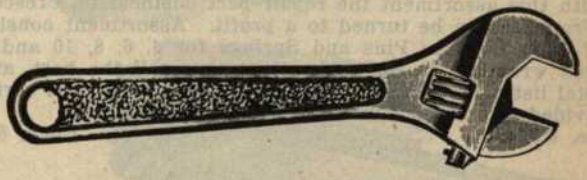
Black Finish, Polished Jaws.

Lgth., ins.	Will open ins.	Weight doz., lbs.	Per doz.
6	¾	5½	$16.00
8	1	12	$20.00
10	1⅜	22	$24.00
12	1⅝	33	$36.00
14	2	58	$48.00

½ dozen in a box.

Adjustable Wrenches

Crescent Pattern



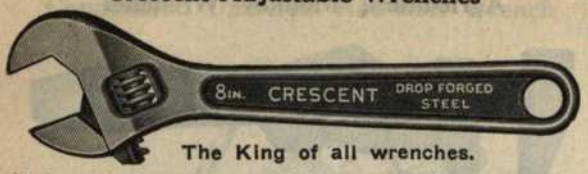
A Strictly High-grade Wrench and Equal to any Other Make of This Style Wrench.

This Wrench opens on an angle of 22½ degrees with the handle, permitting its use in places difficult to get at with the ordinary wrench. Parts are accurately fitted and are interchangeable.

No.	Size, ins.	Capacity, ins.	Weight ozs.	Per doz.
304	4	½	2	$15.60
306	6	¾	5	$15.60
308	8	1 1/16	10	$19.20
310	10	1⅛	18	$24.00
312	12	1 5/16	29	$36.00

1 in a box.

Crescent Adjustable Wrenches**



The King of all wrenches.

This wrench can be used in practically every opening where a solid wrench can be used. The 10-inch size takes the place of nine sizes of solid wrenches. Other sizes proportionately.

With each order for six of the 4-inch size we include a very attractive display card on which the six wrenches are mounted.

Size, ins.	Capacity, ins.	Weight, ozs.	Per doz.
4	½	2	$15.60
6	¾	5	$15.60
8	1⅛	10	$19.20
10	1⅛	18	$24.00
12	1⅛	32	$36.00
15	1⅛	69	$54.00
18	2⅛	112	$78.00

Packed 1 in a box.

Repair Parts for Crescent Wrenches

Size Wrench, ins.	4	6	8	10	12	15	18
	Each	Each	Each	Each	Each	Each	Each
No. 2 Jaw.	$0.50	$0.50	$0.60	$0.80	$1.20	$1.70	$2.30
No. 3 Screw.	$0.20	$0.20	$0.24	$0.30	$0.50	$0.70	$1.10
No. 4 Pin.	$0.10	$0.10	$0.10	$0.10	$0.20	$0.20	$0.20
No. 5 Spring	$0.10	$0.10	$0.10	$0.10	$0.10	$0.10	$0.10

No. RP1 Dealers' Repair Part Assortment

Repair parts are usually considered a necessary evil, but with this assortment the repair part business on Crescent Wrenches can be turned to a profit. Assortment consists of Jaws, Knurls, Pins and Springs for 4, 6, 8, 10 and 12 inch wrenches in the proportions that sell the best, at a total list price of $7.13. Packed in heavy cardboard carton divided into compartments for the various sizes.

No. RP1.....Each, 6.65

No. TK31 Crescent Kit

Contains one 8-inch genuine Crescent Adjustable Wrench, one L26, 6-inch Crescent thin straight nose combination Plier, and one K24, 4-inch Crescent Screw Driver. Kit is made of stout, brown duck, packed one in a box. Weight 1¾ pounds.

No. TK31.....Each, 2.35

Crescent Double End Wrenches**

Drop-forged, heat-treated, polished. Parts interchangeable with Crescent Single End Wrenches.

Size	Capacity, ins.	Wt., ozs.	Per doz.
4-6	½- ¾	6	$26.40
6-8	¾- 1⅛	11	$30.00
8-10	1⅛-1⅛	19	$36.00
10-12	1⅛-1⅛	36	$48.00

Packed 1 in a box.

No. DB6 Crescent Wrench Assortment

This assortment consists of six 6-8 Crescent Double End Wrenches, one of which is mounted on the card and five are packed in regular boxes. Card measures 8½x11 inches with lock easel back. All put up in a carton with Display Card.

No. DB6—Assortment complete, weight 5 lbs..Each, $11.70

No. DB5 Crescent Wrench Display Assortment

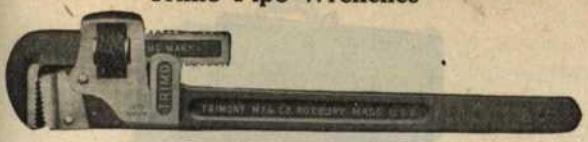
This display board is 25 ins. square, made of oak, natural finish. A transfer is mounted on the board and shows the wrenches in actual size and color. Lettering is in gold. Has hooks to hold an assortment on the board if desired.

This assortment contains 6 4-in.; 12 6-in.; 12 8-in.; 6 10-in.; 3 12-in.; 1 15-in.; 1 18-in.; 6 6-8 double end; and 3 8-10 double end.

No. DB5—Assortment complete, weight 70 lbs.Each, $98.60

Good Tools make a good mechanic better.

Trimo Pipe Wrenches



All Sizes Made with Steel Handles.

Length open, ins.	Holds pipe, ins.	Weight each, lbs.	Each
6	⅛ to ½	½	2.00
8	⅛ to ¾	¾	2.25
10	⅛ to 1	1½	2.50
14	¼ to 1½	3	3.50
18	¼ to 2	5	5.00
24	¼ to 2½	8½	7.25
36	½ to 3½	16¾	13.50
48	1 to 5	24	20.00

6 to 24-in., ½ doz. in a box; larger sizes 1/6 doz. in a box.

Trimo Auto Pipe Wrenches

THIN JAW.

We can furnish Trimo Auto Pipe Wrenches in 6, 8 and 10-inch sizes and at the same price as the regular Trimo Wrenches listed above in similar sizes. These wrenches are the same as the regular Trimo Wrenches except have thin jaws. Especially adapted for automobile and close quarter work.

Length open, ins.	Holds pipe, ins.	Weight, each, lbs.	Each
6	⅛ to ½	½	2.00
8	⅛ to ¾	¾	2.25
10	⅛ to 1	1½	2.50

½ dozen in a box.

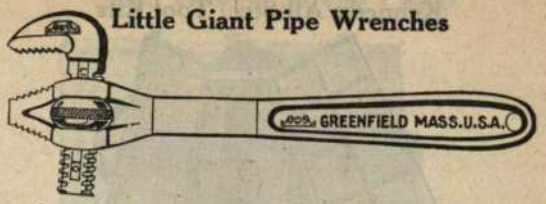
Repairs for Trimo Pipe Wrenches

Size, ins.	Movable Jaw Each	Nut Each	Insert Jaw Each	Frame Each	Springs Each	Pins Frame Each	Pins Jaw Each	Nut Guards Pair
6	.75	.12	.35	.40	.03	.03	.03	.15
8	.80	.15	.40	.45	.03	.03	.03	.15
10	.85	.20	.50	.55	.03	.04	.04	.20
14	1.15	.30	.60	.70	.03	.04	.04	.30
18	1.75	.35	.70	.95	.04	.04	.04	.35
24	2.25	.55	.80	1.40	.04	.04	.04	.45
36	4.35	1.10	1.10	2.20	.04	.05	.05	.55
48	7.50	1.50	2.00	2.70	.04	.05	.05	.65

Trimo Pipe Wrench Display

This attractive metal lithographed display will be furnished free with an order for 1½ dozen assorted Trimo Wrenches.

Little Giant Pipe Wrenches



Drop forged and heat treated throughout, a tool designed to reach unhandy places. For plumbing, gas or steam fitting and repair work of all kinds.

Length, ins.	Holds pipe, ins.	Weight each, lbs.	Each
8	⅛ to ¾	¾	2.25
10	⅛ to 1	1¼	2.50
14	⅛ to 1½	2½	3.50
18	⅛ to 2	4½	5.00
24	⅛ to 2½	7½	7.25

8 to 18-inch, ½ dozen in a box; 24-inch, 1 in a package.

Stillson Pipe Wrenches

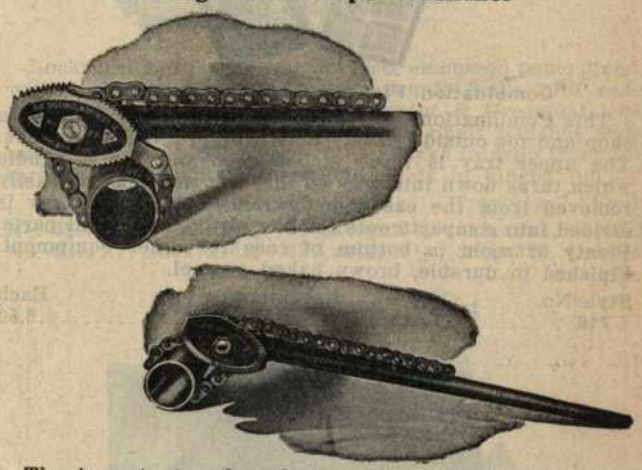
Sizes 6, 8, 10 and 14-inch with Wood Handles.

Sizes 18 and 24-inch with Steel Handles.

Length open, ins.	Holds pipe, ins.	Weight each, lbs.	Wrenches Each	Jaws Each	Frames Each
6	⅛ to ½	⅝	2.00	.75	.38
8	⅛ to ¾	⅝	2.25	.80	.42
10	⅛ to 1	1⅜	2.50	.85	.50
14	¼ to 1½	2½	3.50	1.15	.60
18	¼ to 2	4½	5.00	1.75	.75
24	¼ to 2½	8	7.25	2.25	.95

½ dozen in a package.

Billings Chain Pipe Wrenches



The important and exclusive feature of this wrench is its double-action or reversibility. Pipe can be turned either direction without the process of removing and turning over the wrench. This is due to the angular position of the elliptical jaws, which allows the engagement of either the outer or inner teeth.

The handle and jaws are made from steel drop-forgings of superior quality, the jaws being carefully hardened. All parts are interchangeable.

No.	Capacity Pipe, ins.	Length Over All, ins.	Length Chain, ins.	Weight, lbs.	Each
14	⅛ to ¾	14	8	2⅝	5.00
20	⅛ to 1½	20	12½	6¾	7.00
27	¼ to 2½	27	16½	11⅝	10.00
37	¾ to 4	37	20¾	20¼	14.00
47	1 to 6	47	30¼	30⅞	18.00
57	1½ to 8	57	41	48	22.00
67	2 to 12	67	55	65	36.00
87	4 to 18	87	76	130	80.00

Kennedy All-Steel Tool Kits

For Mechanics, Repair Men, Railroad Men, Construction Men, Electrical Workers, and Contractors.

This Kit combines lightness of weight with great strength and durability. Reinforced at all points of strain. Formed from the metal, not stamped. Electrically welded throughout and double seamed. They are built to withstand wear and hardest usage. Equipped with tray, very handy for bits, drils and small parts. Fitted with multiple-change locks, heavy corner irons, strong side-catches and leather handles with steel cores. Finished in durable, brown baked enamel. Can be carried without buckling or changing shape of Kit.

No.	Size, Inches	Each
114.	14x 7x 9	5.25
116.	16x 9x11	5.50
118.	18x10x13	5.75
120.	20x11x13	6.00
122.	22x11x13	6.25

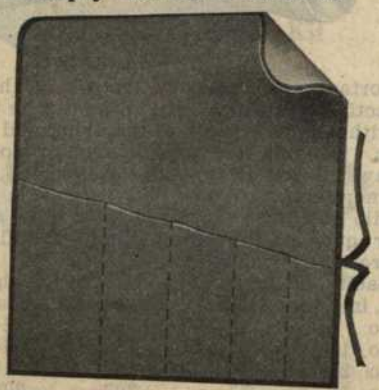
Kennedy Combination Case

Combination Flat-top Case for Repairmen.

This Combination Case is designed for use both in the shop and for outside work. It is equipped with two trays. The upper tray is three inches deep and has a handle which turns down into tray so that the tray may be easily removed from the case and carried. The lower tray is divided into compartments for bits, drills, and small parts. Plenty of room in bottom of case for other equipment. Finished in durable, brown baked enamel.

Style No.	Size, Inches	Each
716.	16x7x9	6.50

Empty Canvas Tool Rolls



For Wrenches or Other Tools

5 Compartment..Ea., $0.90	7 Compartment..Ea., $1.20
6 Compartment..Ea., $1.00	8 Compartment..Ea., $1.50

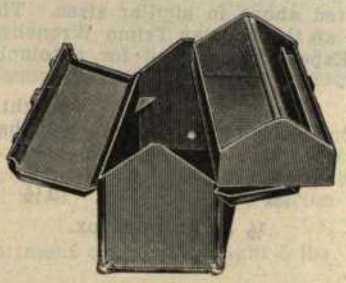
Kennedy Machinist Cases

The improved Kennedy Machinist Cases embody changes which make them stronger, more durable, and better equipped than most machinist cases on the market.

They are built to stand the wear and tear of hardest usage. The drawers run on rails which cannot let them drop out of place, regardless of the weight of their contents. Reinforced throughout, fitted with solid brass drawer pulls, Corbin locks and side catches, leather handle, reinforced with steel core, and protected by solid corner irons. Finished in durable brown baked enamel.

No.	Size, inches	
515	15½x7x12½	16.50
519	19 x8x12½	17.50

Kennedy Tool Kit



Made of heavy material, equipped with a strong, convenient tote tray, 20 inches long, 10 inches wide, and 13 inches high. Long enough to carry a 21-inch speed wrench, and large enough for a complete assortment of tools, but not too bulky to carry. The tote tray has a strong handle that fits the hand, and a partition which is convenient for sockets. Ideal for work in garage, repair shop, etc. Finished in durable, brown baked enamel.

No.	Size, inches	Each
20G	20x10x13	7.25

Kennedy All-Steel Parts Cabinet

For Garages and Repair Shops

Keep your stock of bolts, nuts, cap-screws, washers, and small parts in a Kennedy Cabinet where you can find them when you want them.

The sixteen drawers in the Kennedy Cabinet can be divided into any size compartments desired to conveniently carry this stock of small repair parts by simply tacking light wooden partitions in the drawers.

Dimensions of drawers: 6 inches long, 5½ inches wide, 2¼ inches deep. Finished in durable, brown baked enamel.

No.	Size, inches	Each
16D	22½x11½x6½	12.75

Union Mechanic's or Garage Chest

Conveniently arranged for a complete outfit of Garage tools. The third long drawer from top is partitioned for a set of socket wrenches and the bottom drawer is a tray with telescoping steel handle. Sargent & Greenleaf lock with 100 key changes, two flat keys.

Chest frame and tray lock corner jointed of solid oak. Chest back and drawer bottoms three ply veneer.

Finish: Black, oil proof, inside and out.

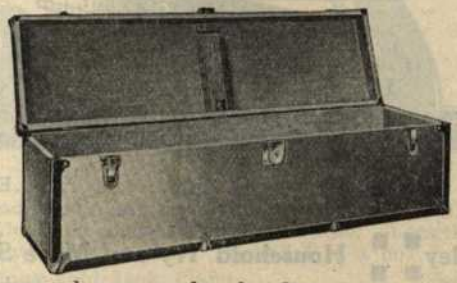
Inside Dimensions Inches

	Length	Width	Depth
2 Drawers	4	7⅜	⅞
1 Drawer	4	7⅜	2⅛
2 Drawers	12⅞	7⅜	⅞
1 Drawer	12⅞	7⅜	2⅛
1 Drawer	18¼	7⅜	2⅛
Tray	18	7⅜	3⅛

Outside Dimensions—20¼x9¼x13¼ high.

No. K.....Each, 16.50

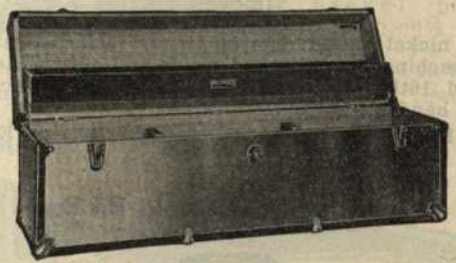
Union "Shoulder" Chests



Lock-cornered case made of soft wood is zinc covered and lined with heavy embossed paper. Special Corbin lock with 12 key changes, two flat keys. Saw block in the top will carry three saws. All materials, trimmings and workmanship the highest quality.

	Outside, Ins.	Inside, Ins.	Each
No. 132	32x8¼x8½	31¼x7½x8	5.90

Union "Special" Chests

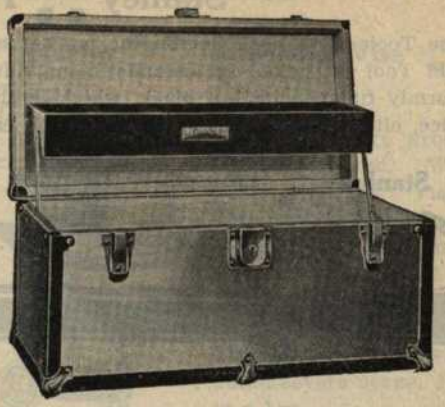


Soft wood, lock cornered case, zinc covered, embossed paper lined and providing ample capacity for the average outfit of carpenter's tools.

The Union tray is automatically raised and lowered with the top and always remains absolutely level and out of the way. Sargent & Greenleaf lock with 100 key changes, two flat keys. Saw blocks at the back for three saws. A framing square can be carried with one end projecting through a slot in the top.

	Outside, Ins.	Inside, Ins.	Tray, Ins.	Each
No. 532	32x8¾x10	31¼x8x9¼	30⅜x3¾x1⅞	10.00
No. 534	34x8¾x10	33¼x8x9¼	32⅜x3¾x1⅞	10.50

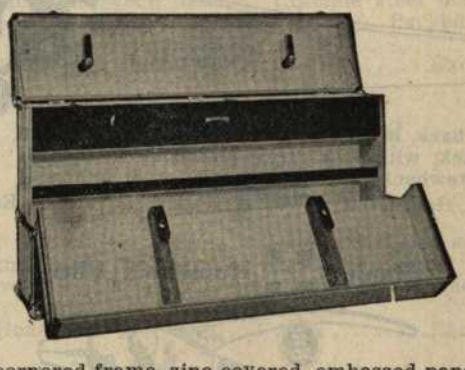
Union General Service Chests



Zinc covered and embossed paper lined. Made with and without tray. Sargent & Greenleaf lock with 100 key changes, two flat keys. Steel tray automatically raises with top and always remains level and out of the way.

	Outside, Ins.	Inside, Ins.	Tray, Ins.	Each
No. 216	16x8x8½	15¼x7¼x8	14¼x4x1½	6.00
No. 219	19x8x8½	18¼x7¼x8	17¼x4x1½	6.30
No. 222	22x8x8½	21¼x7¼x8	20¼x4x1½	6.70
No. 225	25x8x8½	24¼x7¼x8	23¼x4x1½	7.30

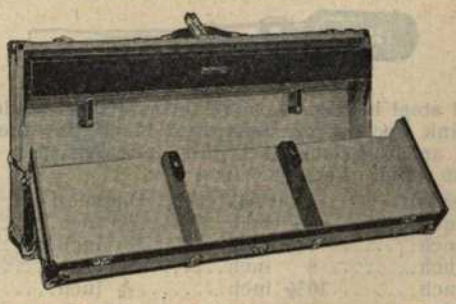
Union "Improved" Chests



Lock-cornered frame, zinc covered, embossed paper lined, with tray for small tools permanently built into case adding considerable strength. Sargent & Greenleaf lock with 100 key changes, two flat keys. Shelf 3 inches wide under tray for small planes, etc. Blocks in drop front for three saws. Adjustable level brackets in hinged top.

	Outside, Ins.	Inside, Ins.	Tray, Ins.	Each
No. 632	32x7x16¼	31¼x6⅛x15½	31¼x3x2	13.70
No. 634	34x7x16¼	33¼x6⅛x15½	33¼x3x2	14.50

Union "Standard" Chest



Lock-cornered, soft wood frame, zinc covered, embossed paper lined.

Tray, lock cornered for extra strength, pulls out, always level, with no danger of dropping down. Sargent & Greenleaf lock with 100 key changes, two flat keys.

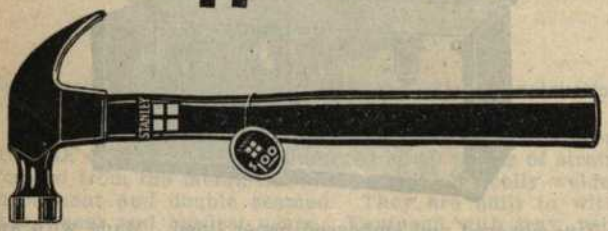
The hinged drop front carries three saws, level brackets are at the back of chest under tray. Framing square stands up in front of the tray.

	Outside, Ins.	Inside, Ins.	Tray, Ins.	Each
No. 732	32x7x16¼	31¼x6⅛x15½	30¼x3x2¼	12.00

Stanley Four Square Household Tools

These Tools have been put on the market to meet the exact needs of the householder. Practically every Stanley Household Tool is packed in an artistic individual container, in keeping with the general character of the tools. They are uniformly finished in dull black, which is the best finish for their use in the household. Each tool carries its own retail price, either on a separate tag or on the envelope or container enclosing it.

Stanley Household Hammer



Made of a special steel, carefully forged, hardened and tempered. Bell face; round neck and poll; curved claw which easily pulls any size of nails and brads. Face, poll and top of claw are polished, rest of head dull black. Sound hickory handle, dull black. 13 inches over all. Weight without handle, 14½ ounces. Packed 1 in a box.

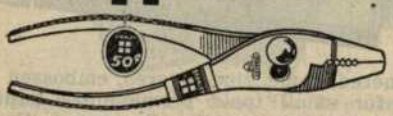
Stanley Household Hammer.....Each, 1.00

Stanley Household Saw

Thin back, highly po ished crucible steel blade. Handle, dull black, with four nickel plated brass screws. 24 inch, hand skewback, 8 point. Packed 1 in a box.

Stanley Household Saw.....Each, 2.25

Stanley Household Pliers



6½ inch. Coppered and nickel plated. Forged from high grade tool steel. Narrow nose. Combination slide joint and shear cutter. Packed 1 in a box, 12 boxes in a carton.

Stanley Household Pliers.....Each, .50

Stanley Household Screw Drivers

Round steel blades. A rivet through the ferrule, handle and shank securely fastens the blade in the handle. Tapered and fluted handles, dull black, specially designed to fit the hand. Packed 6 in a box.

Blade Length	Over All	Diameter	Each
1½ inch.....	3¼ inch.....	⅛ inch.....	.15
2½ inch.....	6½ inch.....	3/32 inch.....	.30
4 inch.....	9 inch.....	¼ inch.....	.35
5 inch.....	10½ inch.....	5/16 inch.....	.40

Stanley Household Mill File

8 inch Single Cut. Each file fitted into dull black handle, ready for use. Packed 6 in a box.

Stanley Household Mill File.....Each, .25

Stanley Household Slim Taper File

6 inch Single Cut. Each file fitted into dull black handle, ready for use. Packed 6 in a box.

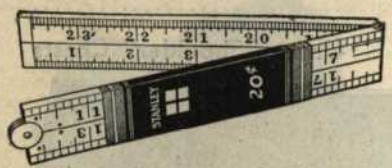
Stanley Household Slim Taper File.....Each, .20

Stanley Household "Zig-Zag" Rule

Rivet joints. Yellow enamel finish, with joints and tips dull black. Regular figuring. Graduated in 16th inches on both sides. Length, 4 feet. Packed 6 in a box.

Stanley Household "Zig-Zag" Rule.....Each, .35

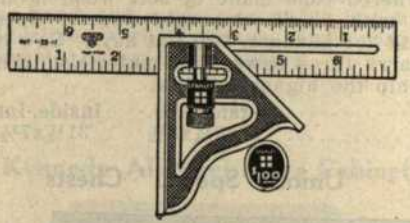
Stanley Household Boxwood Rule



Two foot. Four fold. 1 inch wide. Round joint. Middle plates. Heavy figures. Graduated in 8ths and 16ths inches. Packed 12 in a box.

Stanley Household Boxwood Rule.....Each, .20

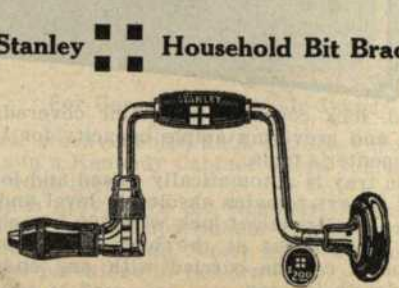
Stanley Household Try and Mitre Square



Blade nickel plated; can be firmly locked at any point. Edges machined and squared inside and out. Graduated in 8ths and 16ths. Iron handle, dull black. 7-inch blade; 2⅝-inch handle. Packed 1 in a box.

Stanley Household Try and Mitre Square.....Each, 1.00

Stanley Household Bit Brace

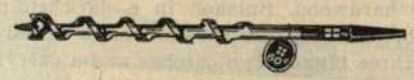


Open ratchet. Nickel plated. Shell, hardwood head and handle, dull black. Alligator jaws. 8-inch sweep. Packed: Each in a separate wrapper, 2 braces in a box.

Stanley Household Bit Brace.....Each, 2.00

Stanley Four Square Household Tools—Continued

Stanley Household Auger Bits



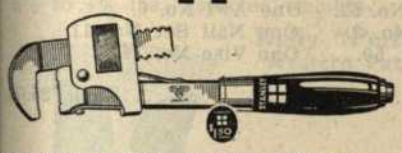
Solid center, extension lip, double cutter. Correctly tempered. Accurate for size. Highly finished throughout. Shank end of bit, dull black.

Size in 16ths: 4, 6, 8, 10, 12, 16.

Packed, 4, 6 and 8-16ths: One each in an envelope, 6 envelopes in a box. 10, 12 and 16-16ths: One each in a box, 6 boxes in a carton.

4/16	Each,	.36	10/16	Each,	.42
6/16	Each,	.36	12/16	Each,	.50
8/16	Each,	.36	16/16	Each,	.68

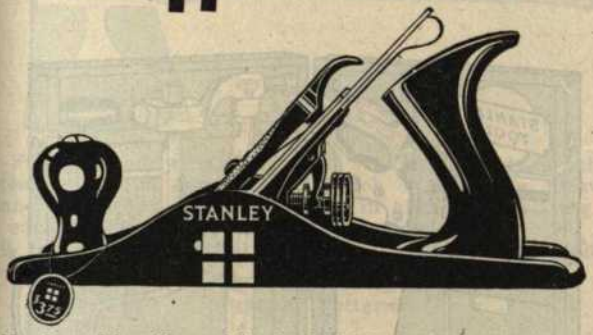
Stanley Household Pipe Wrench



10 inch. Hardened steel jaws. Capacity, ⅛ inch to 1 inch. Wood handle, dull black. Packed 1 in a box, 6 boxes in a carton.

Stanley Household Pipe Wrench.....Each, 1.50

Stanley Household Jack Plane



Hardwood handle and knob, dull black. Sides, dull black. Cutter adjustable endwise and sidewise. Length, 11½ inches. Cutter, 1¾ inches. Packed 1 in a box.

Stanley Household Jack Plane.....Each, 3.75

Stanley Household Block Plane

Lever cap and sides, dull black. Cutter, screw adjustment. Lever screw, lever cam, adjusting wheel and screw, nickel plated. Length, 6½ inches. Cutter, 1⅝ inches. Packed 1 in a box.

Stanley Household Block Plane.....Each, 1.50

Stanley Household Hand Axe

Made from one-piece tool steel, hand tempered in oil. Cutting edge, polished and honed. Head, black lustrous finish, deep etched. Sound hickory handle, dull black, 18 inches over all. Weight without handle, 2¼ pounds. Packed: Each head carefully protected with a cardboard sheath.

Stanley Household Hand Axe.....Each, 1.75

Stanley Household Vise

The jaws are ground and carefully fitted. Width of jaws, 2 inches. Vise screw with square lathe cut thread working in long, malleable nut. Patented split washer under head of screw to take up wear. Body of vise, dull black. This vise will withstand severe usage. Packed 1 in a box.

Stanley Household Vise.....Each, 2.50

Stanley Household Putty Knife

Dull black, hardwood handle. Crucible steel blade 1⅜ inches wide, 5¾ inches long. Half elastic. Packed 6 in a box.

Stanley Household Putty Knife.....Each, .25

Stanley Household Awl

A rivet through the ferrule, handle and shank securely fastens the blade in the handle. Dull black handle. Length over all, 5 inches; blade, 1¼ inches. Packed 6 in a box.

Stanley Household Awl.....Each, .30

Stanley Household Chisels

Socket, pocket bevel edge. Blades 3¼ inches long. Dull black handles, leather capped.

Blade: ⅜-inch, ½-inch, ¾-inch, 1-inch.

Packed 1 in a box, 6 boxes in a carton.

⅜-inch	Each,	.90	¾-inch	Each,	1.00
½-inch	Each,	.95	1-inch	Each,	1.25

Stanley Household Level

Selected hardwood, carefully seasoned; 2⅜ inches by 1¼ inches stock, 18 inches long. Proved glasses, non-adjustable. Dull black hand grip. Packed 1 in a box.

Stanley Household Level.....Each, 1.25

Stanley Household Pry Bar

Drop forged from chisel steel. Dull black, except face of bit, which is polished. Length, 15 inches; diameter, ⅝ inch. Packed 1 in a box.

Stanley Household Pry Bar.....Each, .75

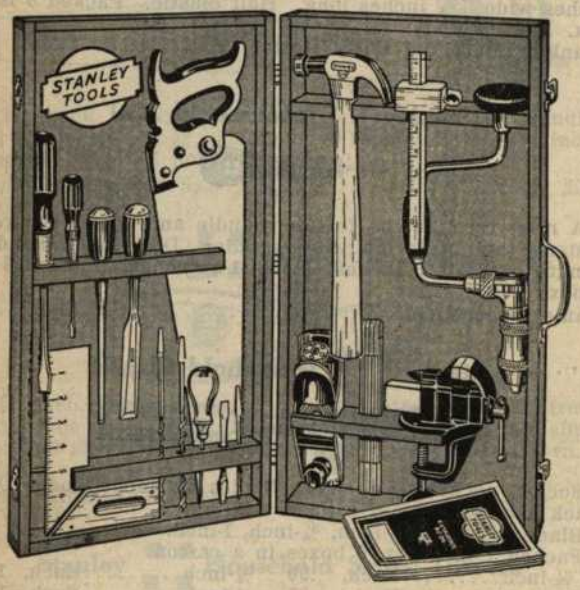
No. 902 Stanley Tool Chest

Made of hardwood, finished in a dark stain and varnished. Tops and bottoms set in. Joints nailed and glued. There are three hinges, two catches and a carrying handle. 10½ inches wide, 4¼ inches deep, 24¾ inches long. Weight 20 lbs. This chest contains 20 Tools as follows:

One Hammer, 13 oz. No. 12.
One Screw Driver, 5 in. No. 20.
One Screw Driver, 3 in. No. 50.
One Rule (Zig Zag), 4 ft. No. 04.
One Saw (Hand), 20 in.
One Try and Mitre Square, 7½ in. No. 2.
One Marking Gauge No. 62.
One Plane (Bench) No. 3.
One Chisel, ¼ in. No. 50.
One Chisel, ¾ in. No. 50.
One Spoke Shave No. 51.
One Bit Brace, 8 in. No. 945.
One Auger Bit, ¼ in.
One Auger Bit, ⅜ in.
One Gimlet Bit No. 6.
One Screw Driver Bit, ⅛ in. No. 26.
One Pair Pliers.
One Awl No. 6.
One Nail Set No. 11.
One Vise No. 741.

No. 902.....Each, 25.00

No. 903 Stanley Tool Chest

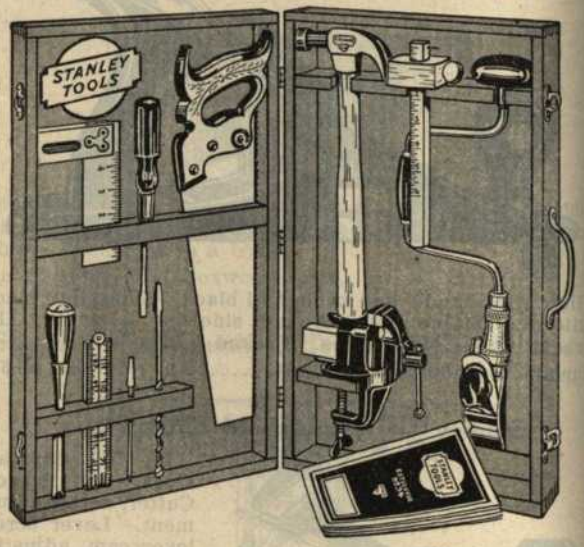


Made of hardwood, finished in a dark stain and varnished. Tops and bottoms set in. Joints nailed and glued. There are three hinges, two catches and a carrying handle; 11¼ inches wide, 4 inches deep, 21 inches long. Weight 16 lbs. This chest contains 17 Tools as follows:

One Hammer, 13 oz. No. 12.
One Screw driver, 5 in. No. 20.
One Screw Driver, 3 in. No. 50.
One Rule ("Zig Zag"), 4 ft. No. 04.
One Saw (Hand), 16 in.
One Try and Mitre Square, 7½ in. No. 2.
One Marking Gauge, No. 62.
One Plane (Block), 7 in. No. 220.
One Chisel, ¼ in. No. 50.
One Chisel, ¾ in. No. 50.
One Bit Brace, 8 in. No. 945.
One Auger Bit, ¼ in.
One Auger Bit, ⅜ in.
One Gimlet Bit, No. 6.
One Screw Driver Bit, ¼ in. No. 26.
One Brad Awl.
One Vise, No. 741.

No. 903.....Each, 20.00

No. 904 Stanley Tool Chest



Made of hardwood, finished in a dark stain and varnished. Tops and bottoms set in. Joints nailed and glued. There are three hinges, two catches and a carrying handle. 11¼ inches wide, 4 inches deep, 19¼ inches long. Weight 13 lbs. This chest contains 12 tools, as follows:

One Hammer, 10-oz. No. 12.
One Screw Driver, 4-in. No. 70.
One Rule, 2-ft. No. 68A.
One Saw (Hand), 14-in.
One Try Square, 4½-in. No. 20.
One Marking Gauge, No. 61.
One Plane (Block), 5½-in. No. 102.
One Chisel, ½-in. No. 50.
One Bit Brace, 8-in. No. 966.
One Auger Bit, ¼-in.
One Auger Bit, ⅜-in.
One Vise, No. 741.

No. 904.....Each, 15.00

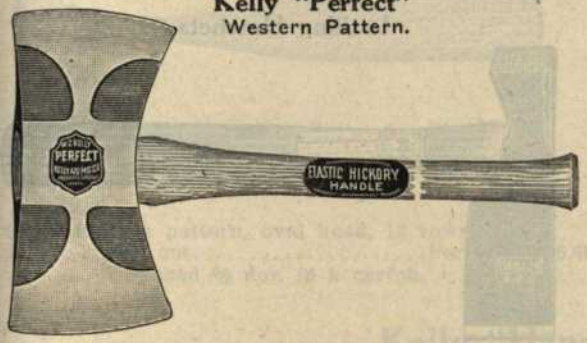
For individual tools in addition to these chests, refer to index.

Kelly Handled Axes

Kelly "Perfect"
Michigan Pattern.

The best known axe, and known as the best. Soft steel body, crucible steel bit, hand tempered. Full polished, with blue bevels. 36-inch high grade hickory handle. Packed 6 axes assorted in a crate. The 3¼-3¾ consists of 2 each 3¼-3½-3¾-lb. axes. The 3½-4½ consists of 1 each 3½-3¾-4¼-4½ and 2 4-lb. axes.
3¼ to 3¾ lbs., assorted weights.....Per doz., $37.50
3½ to 4½ lbs., assorted weights.....Per doz., $38.50

Kelly "Perfect"
Western Pattern.



Full polished, with blue bevels. Soft steel body, crucible steel bit, hand tempered. 36-inch high grade hickory handle. Packed 6 axes assorted in a crate consisting of 1 each 3½-3¾-4¼-4½ and 2 4-lb. axes.
3½ to 4½ lbs., assorted weights.....Per doz., $50.50

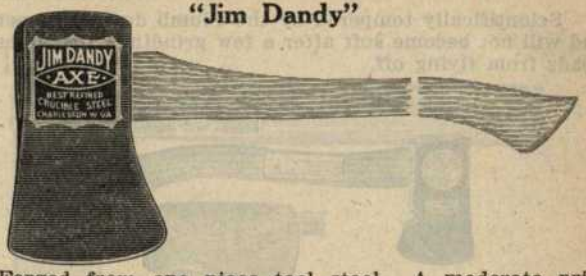
Kelly "Flint Edge"
Michigan Pattern

Chemical black finish, cutting edge honed. Soft steel body, crucible steel bit, hand tempered. 36-inch high grade hickory handle. Packed 6 axes assorted in a crate. The 3¼-3¾ consists of 2 each 3¼-3½-3¾. The 3½-4½ consists of 1 each 3½-3¾-4¼-4½ and 2 4-lb. axes.
3¼ to 3¾ lbs., assorted weights.....Per doz., $36.50
3½ to 4½ lbs., assorted weights.....Per doz., $37.50

Kelly "Flint Edge"
Western Pattern.

Chemical black finish, cutting edge honed. Soft Steel body, crucible steel bit, hand tempered. 36-inch high grade hickory handle. Packed 6 axes assorted in a crate consisting of 1 each 3½-3¾-4¼-4½ and 2 4-lb. axes.
3½ to 4½ lbs., assorted weights.....Per doz., $47.50

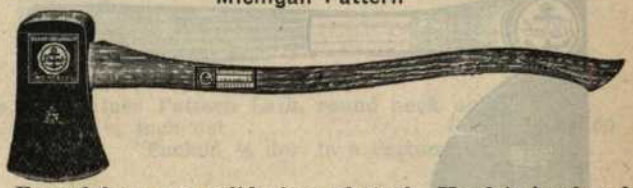
"Jim Dandy"



Forged from one piece tool steel. A moderate price axe, for general and utility purposes. Cutting edges raced. Black forge finish. 36-inch high grade hickory handle. Packed 6 axes assorted in a crate. The 3¼-3¾ consists of 2 each 3¼-3½-3¾. The 3½-4½ consist of 1 each 3½-3¾-4¼-4½ and 2 4-lb. axes.
3¼ to 3¾ lbs, assorted weights.....Per doz., $31.00
3½ to 4½ lbs., assorted weights.....Per doz., $32.00

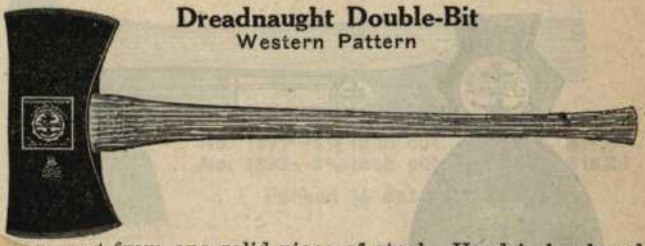
Plumb Handled Axes
"The Red Handle With the Black Head"

"Dreadnaught" Single-Bit
Michigan Pattern



Forged from one solid piece of steel. Head is hardened to a spring temper. High grade hickory handle, individually tested, stained red. Packed 6 in a crate assorted. The 3¼-3¾ consists of 2 each 3¼-3½-3¾. The 3½-4½ consists of 2 each 3½-4-4½ lb. axes.
3¼ to 3¾ lbs., assorted weights.....Per doz., $38.50
3½ to 4½ lbs., assorted weights.....Per doz., $39.50

Dreadnaught Double-Bit
Western Pattern

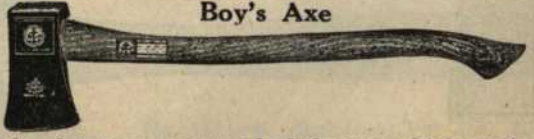


Forged from one solid piece of steel. Head is hardened to a spring temper. High grade hickory handle, individually tested, stained red. Packed 6 in a crate assorted, consisting of 2 each 3½-4-4½ lb. axes.
3½ to 4½ lbs., assorted weights.....Per doz., $49.50

House Axe

Made of one piece of special analysis steel same as Dreadnaught Axes. Weight 2¼ lbs. 19-inch, high grade hickory handle, individually tested, stained red.
House Axe, 6 in a crate.....Per doz., $25.00

Boy's Axe



Made of same process and of the same high grade steel as Dreadnaught Axes. 28 inch, high grade hickory handle, individually tested, stained red. Weight 2¼ lbs.
Boy's Axe, 6 in a crate.....Per doz., $25.50

Plumb Scout Axe and Hatchets

"The Red Handle With the Black Head"

Scientifically tempered by the Plumb double tempering process—the head will not mash—the bit will stay sharp and and will not become soft after a few grindings. Handles of well seasoned selected hickory. Special anchoring keep the heads from flying off.

Official Scout Axe

Complete with Nail Slot and Sheath.
Weight 1 lb. 4 oz.

With leather sheath.....Per doz., $30.00
Without leather sheath.....Per doz., $24.00
Packed ½ dozen in a carton.

Half Hatchets

No.	Size	Bit	Per doz.
2961	1	3¼ in	$21.00
2962	2	3⅝ in	$22.00

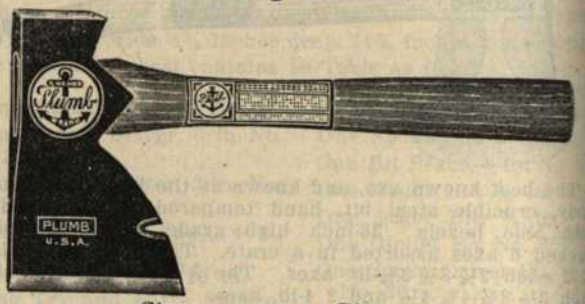
Packed ½ dozen in a carton.

Broad Hatchets

No.	Size	Bit	Per doz.
2991	1	4 in	$24.20
2992	2	4½ in	$27.40
2993	3	5 in	$30.60

Packed ½ dozen in a carton.

Flooring Hatchets



No.	Size	Bit	Per doz.
2985	1	3¾ in	$30.50

Packed ½ dozen in a carton.

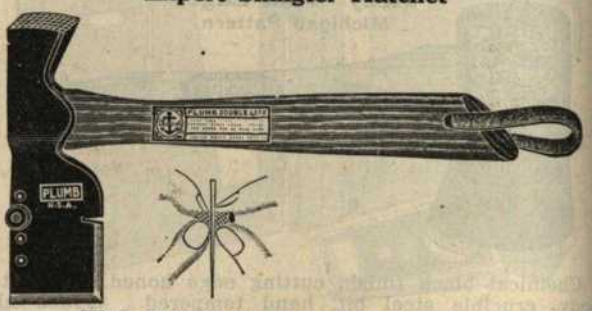
Lathing Hatchets

Underhill Pattern.

No.	Size	Bit	Checkered	Per doz.
HF1961	1	2¼ ins	9 rows	$43.50
HF1962	2	2½ ins	10 rows	$45.00

Packed ½ dozen in a carton.

Expert Shingler Hatchet



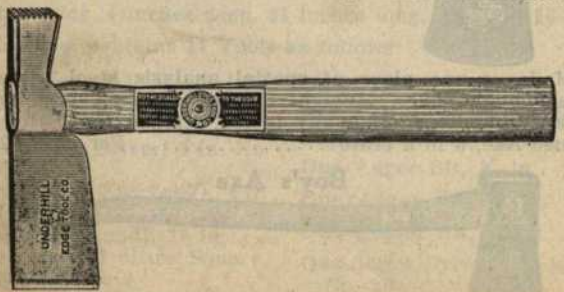
With Shingle Gauge and Leather Strap

No.	Bit	Checkered	Per doz.
HF565	2⅛ ins	10 rows	$47.50

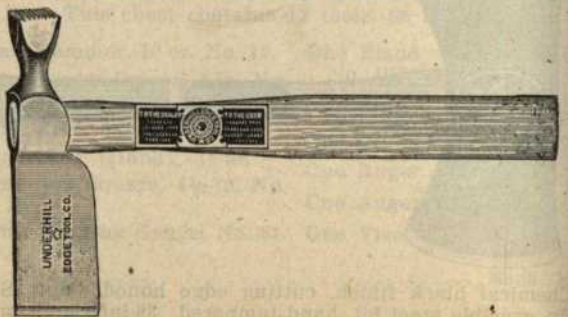
Packed ½ dozen in a carton.

Underhill Lathing Hatchets

"Underhill" special pattern, thin blade Lath Hatchets. Forged, Solid Crucible Steel. Perfect temper, carefully tested. Heads milled and hardened. Full polished and etched. Special shape, second growth hickory handles.

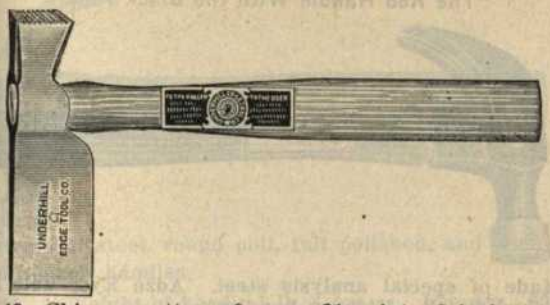


No. 20—Regular pattern, 8 rows, 64 points, 2 inch cut.....Per doz., $45.50
Packed ½ doz. in a carton.



No. 30—Boston pattern, 8 rows, 64 points, 2 inch cut.....Per doz., $45.50
Packed ½ doz. in a carton.

Underhill Lathing Hatchets—Continued



No. 40—Chicago pattern, 9 rows, 81 points, 2 inch cut. . . . . Per doz., $46.40
Packed ½ doz. in a carton.

No. 50—St. Louis pattern, 10 rows, 100 points, 2 inch cut. . . . . Per doz., $48.00
Packed ½ doz. in a carton.

No. 60—California pattern, oval head, 12 rows, 144 points, 2 inch cut. . . . . Per doz., $46.40
Packed ½ doz. in a carton.

No. 21—Haines Pattern Lath, round neck and head, 2¾ inch cut. . . . . Per doz., $42.00
Packed ½ doz. in a carton.

Kelly "Handmade" Hatchets

Forged, high grade tool steel. Carefully tempered and tested. Black forge finish. Hickory handles.

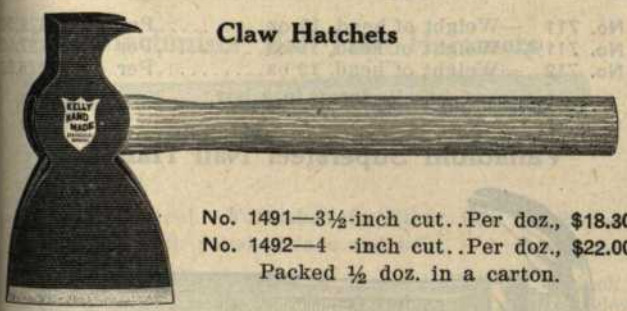
Shingling Hatchets

No. 1191—3½-inch cut. . Per doz., $15.80
No. 1192—4 -inch cut. . Per doz., $17.00
Packed ½ doz. in a carton.

Half Hatchets

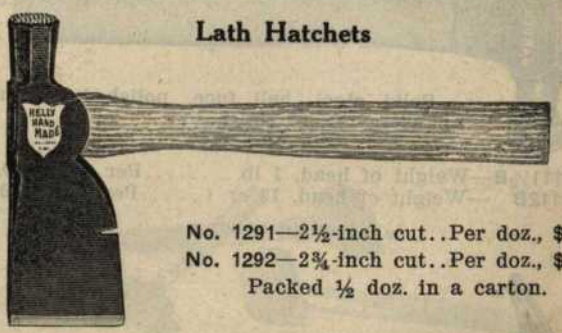
No. 1391—3¼-inch cut. . Per doz., $17.00
No. 1392—3⅝-inch cut. . Per doz., $18.30
Packed ½ doz. in a carton.

Claw Hatchets



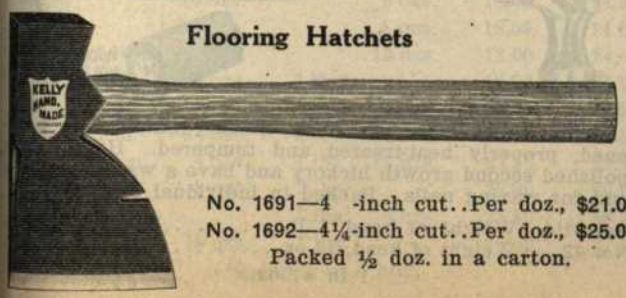
No. 1491—3½-inch cut. . Per doz., $18.30
No. 1492—4 -inch cut. . Per doz., $22.00
Packed ½ doz. in a carton.

Lath Hatchets



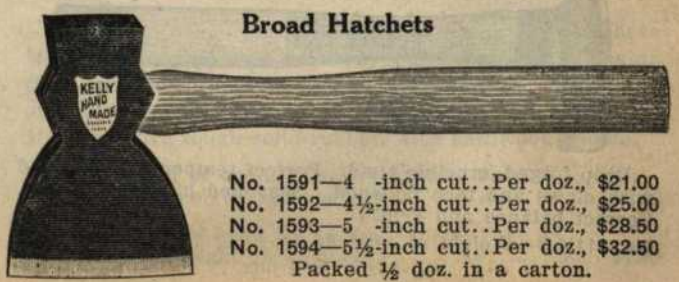
No. 1291—2½-inch cut. . Per doz., $15.80
No. 1292—2¾-inch cut. . Per doz., $17.00
Packed ½ doz. in a carton.

Flooring Hatchets



No. 1691—4 -inch cut. . Per doz., $21.00
No. 1692—4¼-inch cut. . Per doz., $25.00
Packed ½ doz. in a carton.

Broad Hatchets



No. 1591—4 -inch cut. . Per doz., $21.00
No. 1592—4½-inch cut. . Per doz., $25.00
No. 1593—5 -inch cut. . Per doz., $28.50
No. 1594—5½-inch cut. . Per doz., $32.50
Packed ½ doz. in a carton.

Cast Steel Hatchets

Made of special alloy high carbon steel. Bit is ground, polished and sharpened for service. Black finish.

Shingling

No.	Size cut, ins.	Size No.	Weight doz., lbs.	Per dozen
61S.	3¼	1	20	$11.00
62S.	3⅝	2	25½	$12.00

½ dozen in a box.

Half

No.	Size cut, ins.	Size No.	Weight doz., lbs.	Per dozen
51H.	3¼	1	20	$11.00
52H.	3½	2	23	$12.00

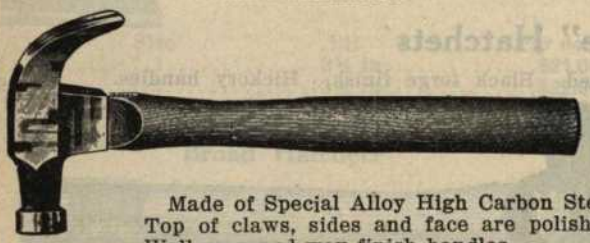
½ dozen in a box.

Claw

No.	Size cut, ins.	Size No.	Weight doz., lbs.	Per dozen
71C.	3½	1	21	$11.00
72C.	3⅞	2	25	$12.00

½ dozen in a box.

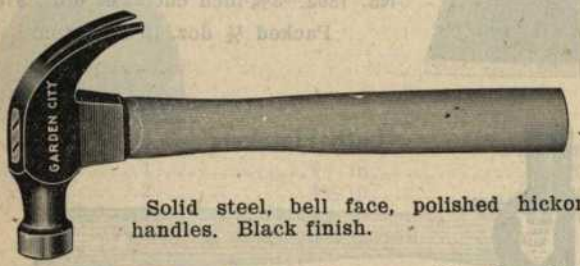
Nail Hammers



Made of Special Alloy High Carbon Steel. Top of claws, sides and face are polished. Well seasoned wax finish handles.

No. 211½—Weight of head, 1 lb. . . . . Per doz., $8.40

½ dozen in a box.



Solid steel, bell face, polished hickory handles. Black finish.

No. 111½B—Weight of head, 1 lb. . . . . Per doz., $10.50
No. 112B —Weight of head, 13 oz. . . . . Per doz., $10.00

½ dozen in a box.

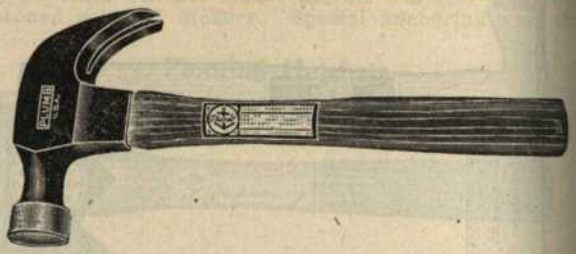
Drop forged, crucible steel. Perfect temper. Black head with claws and face polished. Seasoned hickory handles. Correct balance and grip.

No. 711½B—Weight of head, 16 oz. . . . . Per doz., $10.50

½ dozen in a box.

Plumb Hammers

"The Red Handle With the Black Head"

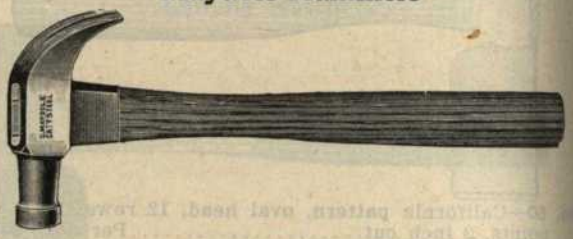


Made of special analysis steel. Adze Eye, Bell Face. Polished finish. Hickory handles.

No.	Size	Weight	Per doz.
No. HF84	Weight of head, 1 lb.		Per doz., $24.00
No. HF82	Weight of head, 13 oz.		Per doz., $22.50

½ dozen in a box.

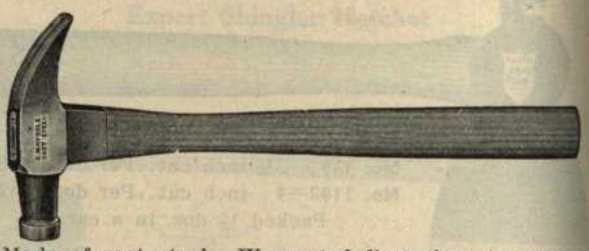
Maydole Hammers



Made of cast steel. Warranted first class in every respect. Bell face. Polished finish. Hickory handles.

No. 11 —Weight of head, 19 oz. . . . . Per doz., $29.30
No. 11½—Weight of head, 16 oz. . . . . Per doz., $27.00
No. 12 —Weight of head, 12 oz. . . . . Per doz., $25.50
No. 13 —Weight of head, 7 oz. . . . . Per doz., $22.50

½ dozen in a box.



Made of cast steel. Warranted first class in every respect. Bell face ripping. Polished finish. Hickory handles.

No. 711 —Weight of head, 19 oz. . . . . Per doz., $29.30
No. 711½—Weight of head, 16 oz. . . . . Per doz., $27.00
No. 712 —Weight of head, 12 oz. . . . . Per doz., $25.50

½ dozen in a box.

Vanadium Supersteel Nail Hammers

Made from Vanadium Alloy Steel. Individually hardened, properly heat-treated and tempered. Handles are polished second growth hickory and have a wax hole in the end for waxing nails. Packed in individual cartons.

No. 41½—Weight of head, 1 lb. . . . . Per doz., $34.50
No. 42 —Weight of head, 13 oz. . . . . Per doz., $34.50

1 in a box.

Adze Eye Nail Hammers

Extra tool steel, round poll, full polished, and with polished hickory handles.

No. 11 —Weight of head, 1 lb. 4 ozs.....Per doz., $23.50
No. 11½—Weight of head, 1 lb.....Per doz., $22.00
No. 12 —Weight of head, 13 oz.....Per doz., $21.60

½ dozen in a box.

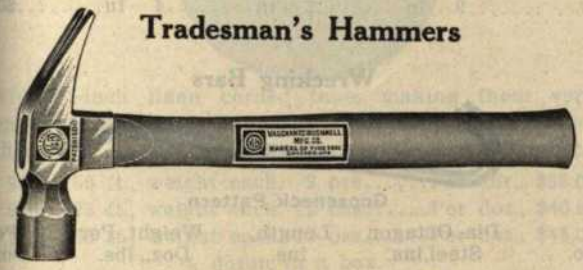
Adze Eye Ripping Hammers

A very fine hammer of popular style and finely finished. Bell face, polished hickory handles.

No. 011½—Weight of head, 1 lb.....Per lb., $22.00

½ dozen in a box.

Tradesman's Hammers

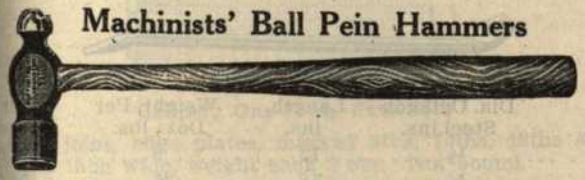


A combination ripping and machinist hammer used by all classes of trade. Full polished. Polished white hickory handles.

No. 999—Weight of head, 1 lb. 4 ozs.....Per doz., $34.50

½ dozen in a box.

Machinists' Ball Pein Hammers

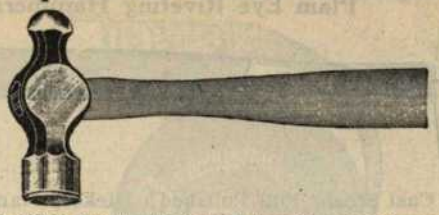


Solid cast steel. Furnished in either full polished or black finish, with polished face and pein.

Size	Wt. with Handle	Wt. of Head	Full Pol. Per doz.	Black Per doz.
0000	10 ozs.	6 ozs.	18.00	14.60
000	12 ozs.	8 ozs.	18.00	14.60
00	1 lb.	12 ozs.	18.00	14.60
0	1 lb. 6 ozs.	1 lb.	19.00	15.20
1	1 lb. 10 ozs.	1 lb. 4 ozs.	20.50	16.50
2	1 lb. 14 ozs.	1 lb. 8 ozs.	22.50	17.80
3	2 lbs. 4 ozs.	1 lb. 12 ozs.	23.50	19.00
4	2 lbs. 8 ozs.	2 lbs.	25.00	20.00
6	3 lbs.	2 lbs. 8 ozs.	28.80	23.20
8	3 lbs. 10 ozs.	3 lbs.	33.60	27.00

⅓ dozen in a box.

Special Automobile Hammers



Special alloy steel. Polished heads, good handles.

No. 902—Weight of head, 8 ozs.....Per doz., $5.50

½ dozen in a box.

Mechanic's Hammers

Made of special alloy high carbon steel. Head and pein polished. Well seasoned wax finish handles.

Size	Wt. with Handle	Wt. of Head	Per doz.
000	12 ozs.	8 ozs.	$6.00
00	16 ozs.	12 ozs.	$6.50
0	20 ozs.	16 ozs.	$7.60

½ dozen in a box.

"Perfect Handle" Ball Pein Hammers

Handles Securely Riveted. Solid One-piece Drop Forging. Face 1 1/16-inch diameter; length 10 inches over all.

No. 616—Weight 19 ozs.....Per doz., $18.50

½ dozen in a box.

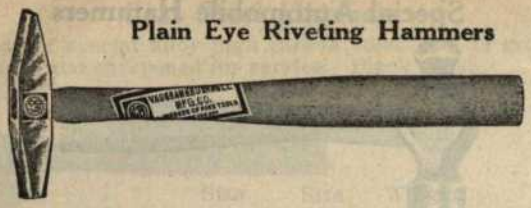
Rubber Mallets

Every car owner and garage man needs one of these Mallets. Can be used for many purposes. For changing tires—will not bruise the tire or injure the rim. Noiseless, an ideal tool for removing dents in automobile fenders. Made of extra tough solid rubber, with hardwood handle.

No. 1—Length of head, 3 inches. Diam. Face 2¼ inches. Weight 12¾ ounces.....Each, $1.40

No. 2—Length of head 3½ inches. Diam. Face 2¼ inches. Weight 16½ ounces.....Each, $1.80

Plain Eye Riveting Hammers



Solid Cast Steel. Full Polished. Hickory Handles.

No.	Weight With Handle	Weight Without Handle	Per doz.
0	6 ozs	4 ozs	$16.80
1	10 ozs	7 ozs	$17.30
2	12 ozs	9 ozs	$18.00
3	1 lb.	12 ozs	$19.20
4	1 lb. 3 ozs	15 ozs	$19.70
5	1 lb. 6 ozs	1 lb. 2 ozs	$21.00

½ dozen in a box.

Cross Pein Blacksmiths' Hand Hammers

Solid Cast Steel. Full Polished. Hickory Handles.

No.	Weight with handle	Weight without handle	Per doz.
0	2 lbs.	1 lb. 10 ozs	$21.50
1	2 lbs. 8 ozs	2 lbs.	$23.20
2	3 lbs.	2 lbs. 10 ozs	$25.20
3	3 lbs. 8 ozs	3 lbs.	$26.80
4	4 lbs.	3 lbs. 8 ozs	$28.50

1-3 dozen in a box.

No. 1030 Blacksmiths' Sledges

No.	Weight each lbs.	Per lb.
308	8	$0.25
310	10	$0.25
312	12	$0.25
316	16	$0.25

No. 1060 Blacksmiths' Sledges

No.	Weight each, lbs.	Per lb.
408	8	$0.25
410	10	$0.25
412	12	$0.25
416	16	$0.25

Improved Sure-Grip Nail Puller

Every puller tested and warranted. Square shank with hand guard, automatic claw, no spring. Handle finished in jet black enamel, other parts blued steel finish, with points of jaws polished bright. 18 inches long, weight 4½ lbs.

No. B1 ..... Each, $2.40

Woodchoppers' Wedges

Made of solid steel, black finish.

No.	Size, lbs.	Finish	Per lb.
129A	3	Oil	$0.18
129B	4	Oil	$0.18
129C	5	Oil	$0.18
129D	3	Axe	$0.20
129E	4	Axe	$0.20
129F	5	Axe	$0.20

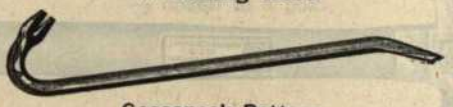
Wood Choppers' Mauls

Oregon Pattern. Tool Steel Bit.

Black Finish, Face and Bit Polished.

Weight Lbs.	Length	Head	Bit	Per Lb.
7	8¾ in	2 1/16 in	3¾ in	$0.36
8	9 in	2 3/16 in	4 in	$0.36

Wrecking Bars



Gooseneck Pattern

No.	Dia. Octagon Steel, ins.	Length, ins.	Weight, Per Doz., lbs.	Per Dozen
12	½	12	9	$3.00
18	⅝	18	25	$4.00
24	¾	24	42	$6.00
30	¾	30	54	$6.60

1 dozen in a bundle.

Straight Pattern

No.	Dia. Octagon Steel, ins.	Length, ins.	Weight, Per Doz., lbs.	Per Dozen
20	½	12	9	$3.00
21	⅝	18	25	$4.00
22	¾	24	42	$6.00
23	¾	30	54	$6.60

1 dozen in a bundle.

Corner Pattern

No.	Dia. Octagon Steel, ins.	Length, ins.	Weight, Per Doz., lbs.	Per Dozen
40	½	12	9	$3.00
41	⅝	18	25	$4.00
42	¾	24	42	$6.00
43	¾	30	54	$6.60

1 dozen in a bundle.

Measuring Tapes

With ½-inch cotton tape well coated. Cases are brass bound with sides handsomely cream enameled. Folding handles.

No. 710— 25 ft., weight each, 4 ozs.....Per doz., $ 7.90
No. 713— 50 ft., weight each, 6 ozs.....Per doz., $10.50
No. 715— 75 ft., weight each, 8 ozs.....Per doz., $15.80
No. 716—100 ft., weight each, 10 ozs.....Per doz., $18.90

½ dozen in a box.

With ⅝-inch linen corded tape, making them very strong and durable. Cases are made of genuine russet leather, steel lined. Brass folding handles and trimmings.

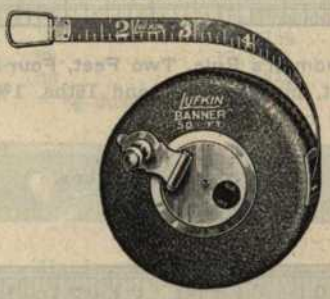
No. 943— 50 ft., weight each, 9 ozs.....Per doz., $36.00
No. 945— 75 ft., weight each, 12 ozs.....Per doz., $40.50
No. 946—100 ft., weight each, 15 ozs.....Per doz., $45.00

½ dozen in a box.

Tape ⅝ inch wide, made of best woven linen with metallic warp. Genuine russet leather cases, folding handles, nickel-plated trimmings.

No. 503— 50 ft., weight each, 13 ozs.....Per doz., $54.00
No. 506—100 ft., weight each, 24 ozs.....Per doz., $84.00

1 in a box.

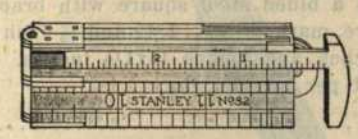


With ⅜-inch steel tape, marked one side in feet, inches and eighths. Cases made of steel, covered with handsome mottled black "Auto Leather," which is very durable. Fitted with flush folding handle opened by pressing pin on opposite side. All metal trimmings are nickel plated. A very serviceable tape.

No. 550— 25 ft., weight each, 7 ozs.....Per doz., $ 50.40
No. 553— 50 ft., weight each, 11 ozs.....Per doz., $ 63.00
No. 555— 75 ft., weight each, 17 ozs.....Per doz., $ 82.20
No. 556—100 ft., weight each, 19 ozs.....Per doz., $105.00

1 in a box.

Boxwood Rules

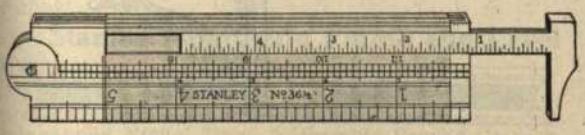


Caliper, One-Foot, Four-Fold

Arch joint, edge plates, marked 8ths, 10ths, 12ths and 16ths, 1 inch wide, weight each 2 ozs. Not bound.

No. 32.....Per doz., $14.20

½ dozen in a box.

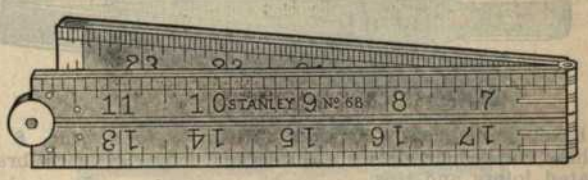


Caliper, One Foot, Two-Fold

Square joint, 12 inch, 8ths, 10ths, 12ths and 16ths of inches, 1⅜ inches wide. Weight each, 2½ ozs. Not bound.

No. 36½.....Per doz., $13.35

½ dozen in a box.

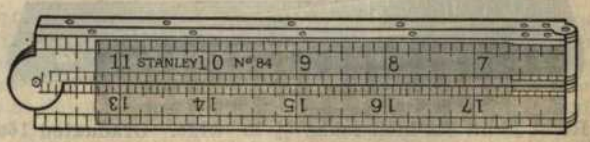


Two Feet, Four Fold

Round joint, middle plates, marked 8ths and 16ths, 1-inch wide, weight each, 2 ozs. Not bound.

No. 68.....Per doz., $3.80

1 dozen in a box.



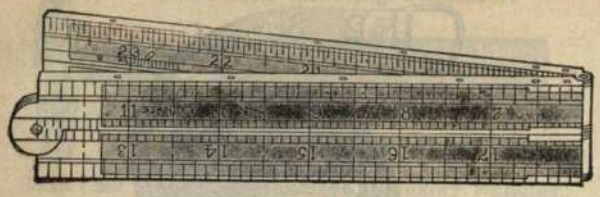
Two Feet, Four-Fold

Square joint, half bound, drafting scales 8ths, 10ths, 12ths, 16ths inches, 1 inch wide; weight each, 3 ozs.

No. 84.....Per doz., $11.45

½ dozen in a box.

Boxwood Rules—Continued

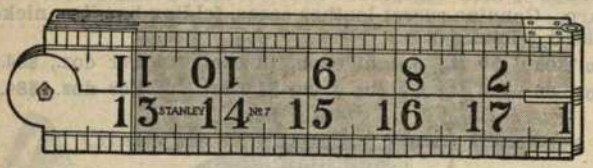


Two Feet Four-Fold

Square joint, bound, marked 8ths, 10ths, 12ths and 16ths, and drafting scale 1 inch wide; weight each, 3 ozs.

No. 62.....Per doz., $13.90

½ dozen in a box.

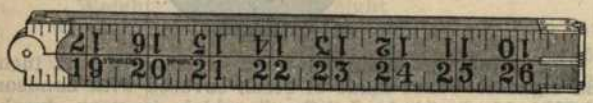


Blindman's Rule, Two Feet, Four-Fold

Square joint, marked 8ths, and 16ths, 1⅜ inches wide. weight each 4 ozs. Not bound.

No. 7.....Per doz., $15.30

½ dozen in a box.



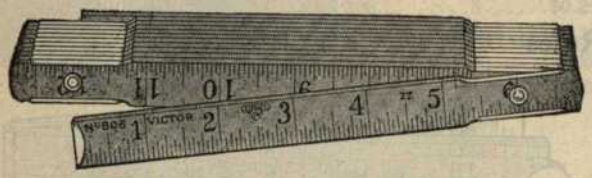
Three Foot, Four-Fold

Arch joint, middle plates. 8ths and 16ths inches, 1 inch wide. Large figures. Weight each, 2 ozs. Not bound.

No. 66½A.....Per doz., $11.05

½ dozen in a box.

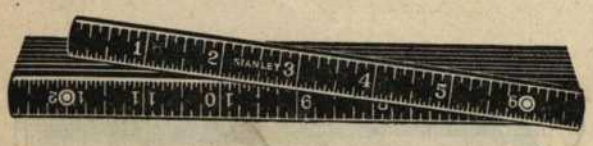
"Zig Zag" Rules



Rivet joint, yellow enamel finish, ⅝ inch wide, 6 in. folds, marked in 16ths. Hardwood material with brass plated joints and tips.

No.	Length, ft.	Folds	Per doz.
804M	4	8	$5.10
805M	5	10	$6.40
806M	6	12	$7.70

½ dozen in a box.



Rivet joint, six inch folds, ½ in. wide. Graduated 16ths inches on both sides. Made of aluminum. Black finish, raised white figures and graduations.

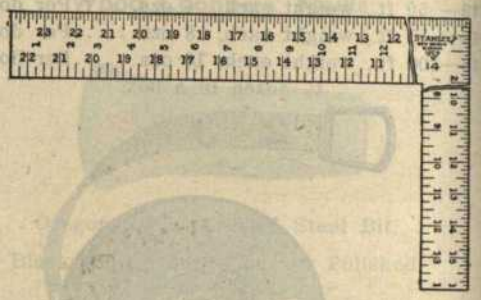
No.	Length, ft.	Folds	Per doz.
424	4	8	$ 21.40
425	5	10	$26.80
426	6	12	$32.15

½ dozen in a box.

Squares

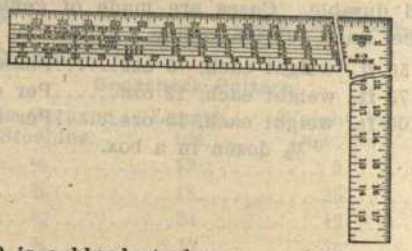
No. F2 is a polished steel square with ⅛ and ¼-inch graduations, body 24x1½ inches and tongue 12x1 inches. Packed 6 in a box, weight per box 8 lbs.

No. F2.....Each, $1.80



No. 14 is a polished steel square with Essex board measure marked ⅛ and ¼ inch graduations, body 24x2 inches and tongue 18x1½ inches. Packed 3 in a box, weight per box, 6¾ lbs.

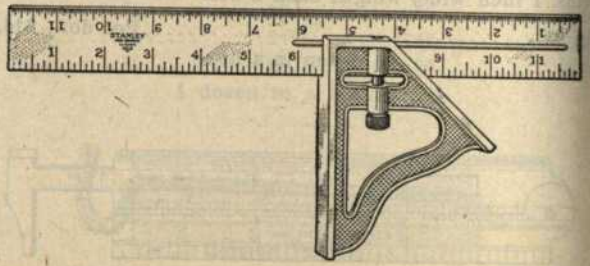
No. 14.....Per doz., $3.00



No. R3B is a blued steel square with brace and Essex Board measure, marked in $\frac{1}{16}$, 1/12 and ¼ inch graduations, body 24x2 inches, and tongue 18x1½ inches. Packed 3 in a box, weight per box 6¾ lbs.

No. R3B.....Each, $4.40

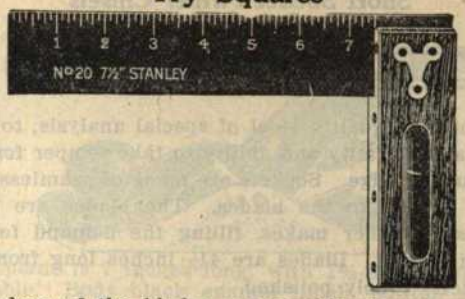
Combination Try and Mitre Square



The edges of blades are machined and squared inside and out. The blade can be firmly locked at any point. 12 inch blade. Marked in ⅛, $\frac{1}{16}$ and $\frac{1}{32}$ inch graduations. Nickel plated, with 3⅝ inch iron handle. Packed 1 in a box, weight per box ¾ lbs.

No. 21.....Each, $1.90

Try Squares



The edges of the blades are machined and are square inside and outside. ⅛-inch graduations. Rosewood handles with brass face plates. Blued blades. No. 204½ has 4½-inch blade and 3½-inch handle. Packed 6 in a box, weight each 4 ozs. No. 206 has 6-inch blade and 4⅝-inch handle. Weight each, 5 ozs.

No. 207½ has 7½-inch blade and 5⅜ handle. Weight each, 8 ozs.

No. 204½. . . . . Per doz., $ 8.30
No. 206. . . . . Per doz., $11.00
No. 207½. . . . . Per doz., $12.00

½ dozen in a box.

Can be used with equal convenience and accuracy as a Try or Mitre Square. The edges of blade are machined and are square inside and out. Graduated 8th inches. Rosewood Handle with brass face plates. Blued blades. No. 24½ has 4½ in. blade and 3⅛ in. handle. Weight each, 4 ozs. No. 27½ has 7½ in. blade and 5 in. handle. Weight each, 8 ozs.

No. 24½. . . . . Per doz., $11.00
No. 27½. . . . . Per doz., $14.50

½ dozen in a box.

Sliding "T" Bevels

These Bevels have an improved locking device which prevents the blade from slipping. Blades are machined and ground on both sides and edges. Rosewood handle, 8 in. blued blade with 5⅞ in. handle. Weight each, 5 ozs.

No. 25. . . . . Per doz., $10.60

½ dozen in a box.

Stanley Aluminum Plumb and Level

Japanned Nickel Trim, Adjustable Proved Glasses,

On account of their light weight, great strength and the fact that they will not rust or warp are especially adapted for carpenters' use. The level glasses are equipped with a cover to protect glass when not in use. Length 24 inches. Weight each, 1¾ lbs.

No. 237. . . . . Each, $7.60

1 in a box.

Stanley Levels

Non-Adjustable Square Top Plate, Two Side Views, Hardwood Polished.

No.	Length, ins.	Size, ins.	Each
0018.	18	1⅜x3⅛	$2.10
0020.	20	1⅜x3⅛	$2.10
0022.	22	1⅜x3⅛	$2.20

½ dozen in a box.

Non-Adjustable Square Top Plate, Two Side Views, Hardwood Polished.

No.	Length, ins.	Size, ins.	Each
024.	24	1⅜x3⅛	$2.30
026.	26	1⅜x3⅛	$2.30
028.	28	1⅜x3⅛	$2.40
030.	30	1⅜x3⅛	$2.40

½ dozen in a box.

Hardwood Brass Tips.

No.	Length, ins.	Size, ins.	Each
324.	24	1⅜x3⅛	$3.60
326.	26	1⅜x3⅛	$3.60
328.	28	1⅜x3⅛	$3.80
330.	30	1⅜x3⅛	$3.80

½ dozen in a box.

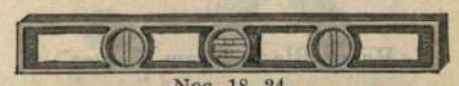
Stanley Adjustable Levels

Mahogany, Brass Tips, One Plumb Proved Glasses.

No.	Length, ins.	Size, ins.	Each
1193A.	12	1 1/16x2⅛	$4.80
1193B.	18	1 1/16x2⅛	$5.60
1193C.	24	1 1/16x2⅛	$6.30

1 in a box.

Sands Aluminum Levels



Nos. 18, 24

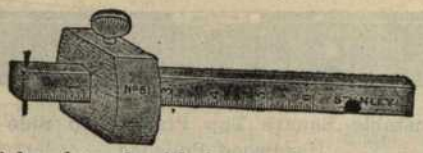
Nos. 26, 28, 30

Made of aluminum and very easy to read in dark places. Will plumb any end up or level any edge up. This allows overhead use to plumb or level ceilings, girders, shafting, etc. Can be used and read in any position, high or low, up or down, at arm's length. Nos. 18 and 24 have 2 plumbs and 2 levels; Nos. 26, 28 and 30 have 4 plumbs and 2 levels, and all have protected glasses.

No.	Length, ins.	Size, ins.	Each
18.	18	2¼x1⅛	$ 6.50
24.	24	2¼x1⅛	$ 8.50
26.	26	2¼x1⅛	$ 9.50
28.	28	2¼x1⅛	$10.00
30.	30	2¼x1⅛	$10.50

1 in a box.

Stanley Marking Gauges

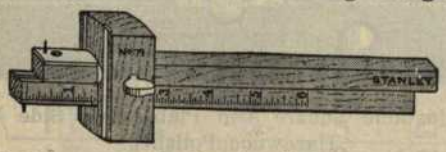


Made of beechwood with boxwood screw, square head. Weight per doz., 2⅞ lbs. Marked with 1/16 inch graduations, 6 inches from point.

No. 61. .....Per doz., $2.60

Packed 12 in a box.

Stanley Mortise and Marking Gauge

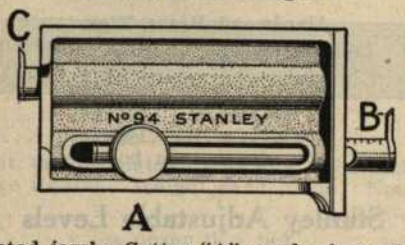


A double bar gauge, having two independent bars working in the same head. One pin is affixed to each bar. One side of the mortise can be marked and the gauge turned over for marking the other side. Made of beechwood, polished, with brass screw, head plated. Weight per dozen, 4¼ lbs. Marked with 1/16 inch graduations, 6 inches from point.

No. 71.....Per doz., $13.50

Packed 6 in a box.

Stanley Butt Gauges



For rabbeted jambs Cutter "A" marks from the jamb in the rabbet; Cutter "B" from the edge of the door engaged in closing; Cutter "C" the thickness of the butt. For nailed on strikes Cutter "B" when reversed marks for the butt on both door and jamb; Cutter "C" the thickness of the butt. Nickel plated. Marked with 1/16 inch graduations for 2 inches. Weight each, ⅝ lb.

No. 94.....Each, $2.30

Packed 1 in a box.

Short Socket Firmer Chisels

Made of high quality steel of special analysis, to assure toughness, uniformity and ability to take temper for a fine lasting cutting edge. Sockets are made of seamless tubing invisibly welded to the blades. The blades are thinner than in some other makes, filling the demand for tools lighter in weight. Blades are 4½ inches long from point to shoulder. Finely polished.

No. 220A—	⅛-inch.	Weight, doz., 3	lbs.	Per doz.,	$11.20
No. 220B—	¼-inch.	Weight, doz., 3¼	lbs.	Per doz.,	$11.20
No. 220C—	⅜-inch.	Weight, doz., 3½	lbs.	Per doz.,	$11.20
No. 220D—	½-inch.	Weight, doz., 3½	lbs.	Per doz.,	$11.20
No. 220E—	⅝-inch.	Weight, doz., 3¾	lbs.	Per doz.,	$12.40
No. 220F—	¾-inch.	Weight, doz., 4	lbs.	Per doz.,	$12.80
No. 220G—	⅞-inch.	Weight, doz., 4½	lbs.	Per doz.,	$14.40
No. 220H—	1 -inch.	Weight, doz., 5	lbs.	Per doz.,	$14.80
No. 220J —	1¼-inch.	Weight, doz., 6	lbs.	Per doz.,	$16.40
No. 220K—	1½-inch.	Weight, doz., 7	lbs.	Per doz.,	$17.60
No. 220M—	2 -inch.	Weight, doz., 9	lbs.	Per doz.,	$20.00

Packed ½ dozen in a box.

Socket Butt Chisels

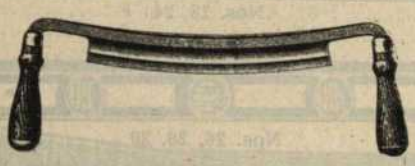
Made of same quality steel as short chisels, but the blades are only 3¼ inches long from point to shoulder. Full formed handles and sockets are short in keeping with length of blade. Finely polished.

No. 200B—	¼-inch.	Weight, doz., 3	lbs.	Per doz.,	$11.20
No. 200C—	⅜-inch.	Weight, doz., 3¼	lbs.	Per doz.,	$11.20
No. 200D—	½-inch.	Weight, doz., 3¼	lbs.	Per doz.,	$11.20
No. 200E—	⅝-inch.	Weight, doz., 3½	lbs.	Per doz.,	$12.40
No. 200F—	¾-inch.	Weight, doz., 3¾	lbs.	Per doz.,	$12.80
No. 200G—	⅞-inch.	Weight, doz., 4	lbs.	Per doz.,	$14.40
No. 200H—	1 -inch.	Weight, doz., 5	lbs.	Per doz.,	$14.80
No. 200J —	1¼-inch.	Weight, doz., 5½	lbs.	Per doz.,	$16.40
No. 200K—	1½-inch.	Weight, doz., 6	lbs.	Per doz.,	$17.60
No. 200L—	1¾-inch.	Weight, doz., 6½	lbs.	Per doz.,	$19.20
No. 200M—	2 -inch.	Weight, doz., 7	lbs.	Per doz.,	$20.00

Packed ½ dozen in a box.

Draw Knives

Razor Blade Draw Knives



This No. 600 Razor Blade Draw Knife has a carefully designed pattern to give stiffness, lightness and form for sharpening readily. Heavy back section to support cutting edge, which is formed to allow full cutting bevel. Blade is 1½ inches wide of high grade tool steel welded to a mild steel back. Hardwood handles are thoroughly fitted and finished. Blades finely polished.

No. 600A—	8-inch,	weight doz., 14	lbs.	Per doz.,	$24.30
No. 600B—	9-inch,	weight doz., 14½	lbs.	Per doz.,	$25.95
No. 600C—	10-inch,	weight doz., 15¼	lbs.	Per doz.,	$28.10

Packed ½ dozen in a box.

Folding Handle Draw Knives

Cutting blade practically the same as No. 600, but fitted with folding handles which serve as a protection to the blade when closed. The joints are made by tapered lugs with malleable wing nuts. Easy to adjust, but very rigid when in use. Finely finished rosewood handles. When folded will pack in a space 3½ inches wide and 1½ inches high.

No. 635A—	8-inch.	Weight, doz., 21	lbs.	Per doz.,	$59.40
No. 635B—	9-inch.	Weight, doz., 22½	lbs.	Per doz.,	$61.50
No. 635C—	10-inch.	Weight, doz., 24	lbs.	Per doz.,	$64.70

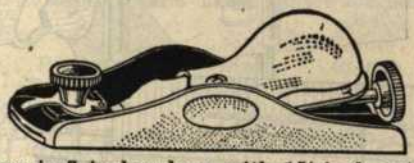
Packed 1 in a box.

Stanley Planes

Block

This plane is 7 inches long, with 1⅝-inch cutter. Non-adjustable. Body black enamel finish, bottom and sides polished. Weight 1⅜ lbs.
No. 110.....Each, $1.60
Packed 1 in a box.

This plane is 7 inches long with 1⅝-inch cutter. Screw adjustment. Body black enamel finish, bottom and sides polished. Weight 1½ lbs.
No. 220.....Each, $4.30
Packed 1 in a box.



This plane is 7 inches long with 1⅝-inch cutter. Body black enamel finish, bottom and sides polished. Nickel trimming. Weight 1⅜ lbs.
No. 65.....Each, $4.20
Packed 1 in a box.

This plane is 6 inches long and has 1⅝-inch cutter. Knuckle joint. Body black enamel finish, bottom and sides polished. Nickel trimming. Weight 1½ lbs.
No. 18.....Each, $3.90
Packed 1 in a box.

This plane is 6 inches long with 1⅝-inch cutter. Body black enamel finish, bottom and sides polished. Corrugated bottom. Weight 8⅛ lbs.
No. 9½.....Each, $2.90
Packed 1 in a box.

Jointer

This plane is 22 inches long, with 2⅝-inch cutter. Body black enamel finish, bottom and sides polished. Corrugated bottom. Weight 8⅛ lbs.
No. 7C.....Each, $10.00
Packed 1 in a box.

Smooth

This plane is 8 inches long with 1¾-inch cutter. Body black enamel finish, bottom and sides polished. Smooth bottom. Weight 3⅛ lbs.
No. 3.....Each, $5.20
Packed 1 in a box.

Same as No. 3 except has corrugated bottom. Body black enamel finish, bottom and sides polished. Weight 3⅛ lbs.
No. 3C.....Each, $5.20
Packed 1 in a box.

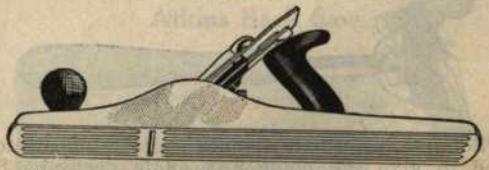
These planes are 9 inches long and have 2-inch cutters. Furnished with either smooth or corrugated bottoms. Body black enamel finish, bottom and sides polished. Weight 3¾ lbs.
No. 4 —Smooth bottom.....Each, $5.70
No. 4C—Corrugated bottom.....Each, $6.00
Packed 1 in a box.

Jack

This plane is 14 inches long and has 2-inch cutter. Body black enamel finish, bottom and sides polished. Smooth bottom. Weight 4¾ lbs.
No. 5.....Each, $6.50
Packed 1 in a box.

Same as No. 5 except has corrugated bottom. Body black enamel finish, bottom and sides polished. Weight 4¾ lbs.
No. 5C.....Each, $6.80
Packed 1 in a box.

Fore



These planes are 18 inches long and have 2⅜-inch cutters. Body black enamel finish, bottom and sides polished. Corrugated bottom. Weight 7¾ lbs.
No. 6C.....Each, $8.80
Packed 1 in a box.

No. 045P Smooth Plane

Smooth Plane, smooth bottom. Length 9 inches. 2-inch cutter. Body black enameled finish, bottom parts polished. Weight 3½ lbs.

No. 045P.....Each, **$5.20**

Packed 1 in a box.

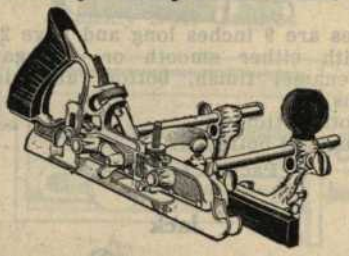
Stanley Rabbet Plane

A Duplex Filletster and Rabbet Plane, has two seats for the cutter, one for regular and other for bull-nose work. It has a spur and a removeable depth gauge. 8½ inches long, with 1½-inch cutter. Weight 3 lbs.

No. 78.....Each, **$4.30**

Packed 1 in a box.

Stanley "Forty-Five" Plane



Seven tools in one in compact and practical form. Beading and Center Beading Plane, Plow, Dado, Rabbet and Filletster, Match Plane, Sash Plane and Slitting Plane. The plane is fitted with spurs for use across the grain. and can be used either right or left hand. With each plane are furnished twenty-three cutters. The cutters together with plane are packed in a neat, substantial box. All metal parts are nickel plated. The handle, knob and fence are made of selected rosewood. Weight 9½ lbs.

No. 45.....Each, **$20.00**

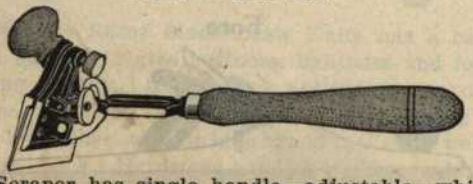
Packed 1 in a box.

Stanley Scrapers

This Scraper has double handle and iron bottom. The blade may be sprung to a slight curve by means of a thumb screw, giving ease of operation and quickness of cut. Handles are raised to protect the user's hands. 11 inches long, 2¾ inch blade, japanned. Weight 1¾ lbs.

No. 80.....Each, **$1.90**

Packed 1 in a box.

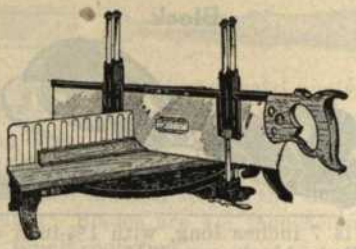


This Scraper has single handle—adjustable—which can be tilted to give the blade any angle desired. Special blades of different forms and widths can be securely held in any position required. Handle and knob of hard wood. 14½ inches long, 3 inch blade, japanned. Weight 1¾ lbs.

No. 82.....Each, **$2.50**

Packed 1 in a box.

Victor Mitre Box

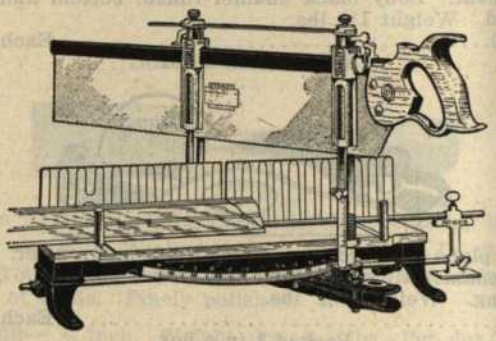


Will cut angles 45° to 90°. For either back or panel saws. Flat guides with saw. Will cut mitre (45°) on work up to 4¾ inches. Weight 25 lbs.

No. 60½—With 20x4 Saw.....Each, **$22.20**

Packed 1 in a box.

Stanley Mitre Box

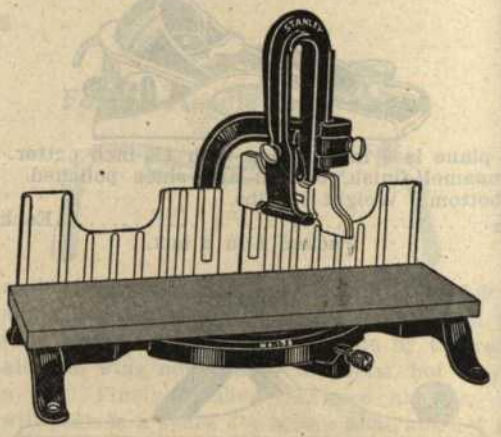


Will cut angles 30° to 90°. Will cut mitre (45°) on work up to 5½ in. Back saw included. Weight 34 lbs.

No. 246—With 26x4 Saw.....Each, **$32.50**

Packed 1 in a box.

Stanley Mitre Box



Will cut angles 45° to 90°. Flat guides. For panel saws. Packed one in a box. Price does not include saw, regularly furnished without saw. Weight 30 lbs.

No. 150.....Each, **$9.00**

Packed 1 in a box.

Disston Hand Saws

No. 7—Warranted crucible steel, grained blade patent ground and tempered, beech handle, full polished, brass screws.

	Pattern	Size	Points to inch	Per doz.
No. 72010	—Panel	20 in	10	$42.50
No. 7268	—Cross Cut	26 in	8	$52.20
No. 7269	—Cross Cut	26 in	9	$52.20
No. 72610	—Cross Cut	26 in	10	$52.20
No. 7265½	—Rip	26 in	5½	$52.20
No. 7266	—Rip	26 in	6	$52.20

⅓ dozen in a box.

No. D8—Warranted refined crucible steel blade, patent ground and tempered, skew back, applewood handle, brass screws.

	Pattern	Size	Points to inch	Per doz.
No. 2010	—Panel	20 in	10	$48.80
No. 2210	—Panel	22 in	10	$52.40
No. 2410	—Panel	24 in	10	$56.20
No. 268	—Cross Cut	26 in	8	$59.00
No. 269	—Cross Cut	26 in	9	$59.00
No. 265	—Rip	26 in	5	$59.00
No. 265½	—Rip	26 in	5½	$59.00
No. 266	—Rip	26 in	6	$59.00

⅓ dozen in a box.

No. 12—Warranted extra refined London spring steel, selected and highly polished blade, carved and polished applewood handle, brass screws.

	Pattern	Size	Points to inch	Per doz.
No. 826	—Cross Cut	26 in	8	$76.90
No. 926	—Cross Cut	26 in	9	$76.90
No. 1026	—Cross Cut	26 in	10	$76.90
No. 526	—Rip	26 in	6	$76.90
No. 526½	—Rip	26 in	5½	$76.90

⅓ dozen in a box.

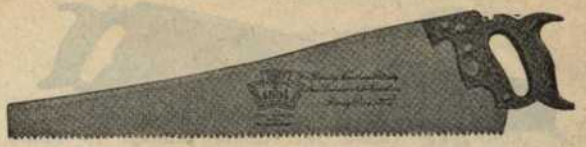
Special Hand Saws

No. 405—Meets the demand for a medium priced saw. Has beech handle, polished, carved grip, brass screws, skew back blade.

	Pattern	Size	Points to inch	Per doz.
No. 4057	—Cross Cut	26 in	7	$36.10
No. 4058	—Cross Cut	26 in	8	$36.10

⅓ dozen in a box.

Disston Hand Saws



No. D20—Warranted crucible steel, skew back, polished blade and edge. Ship pattern, narrow blade. Carved and polished applewood handle, brass screws.

	Pattern	Size	Points to inch	Per doz.
No. D2011	—Panel	22 in	11	$57.60
No. D208	—Cross Cut	26 in	8	$66.00
No. D209	—Cross Cut	26 in	9	$66.00
No. D210	—Cross Cut	26 in	10	$66.00
No. D211	—Cross Cut	26 in	11	$66.00
No. D212	—Cross Cut	26 in	12	$66.00
No. D205½	—Rip	26 in	5½	$66.00
No. D206	—Rip	26 in	6	$66.00

⅓ dozen in a box.

No. D23—Warranted crucible steel, straight back, polished blade and edge. Ship pattern, narrow blade. Carved and polished applewood handle, brass screws.

	Pattern	Size	Points to inch	Per doz.
No. D2311	—Panel	22 in	11	$57.60
No. D238	—Cross Cut	26 in	8	$66.00
No. D239	—Cross Cut	26 in	9	$66.00
No. D2310	—Cross Cut	26 in	10	$66.00
No. D2311	—Cross Cut	26 in	11	$66.00
No. D235½	—Rip	26 in	5½	$66.00
No. D236	—Rip	26 in	6	$66.00

⅓ dozen in a box.

No. 0—Warranted crucible steel, grained blade, patent ground and tempered. Beech handle, polished edge, brass screws.

	Pattern	Size	Points to inch	Per doz.
No. 2608	—Cross Cut	26 in	8	$27.30
No. 2609	—Cross Cut	26 in	9	$27.30

⅓ dozen in a box.

Atkins Junior Mechanic Hand Saw

Made in 20-inch length only, skew back, 9 point; taper ground blade, highly polished. Beech handle, coffee stain, full carved.

Junior Mechanic. . . . . Per doz., $33.55

1 in a box.

Atkins Back Saw

Back Saw made of standard cast steel finely tempered. Beech handle with three screws.

No. 3—14-inch. . . . . Per doz., $30.10

⅓ dozen in a box.

Atkins Hand Saws

Regular Pattern.

Ship Pattern.

No. 53—Genuine Silver Steel, taper ground. Damaskeen finish. Skew back and fitted with Atkins Perfection Handle, made of applewood, embossed and polished. Furnished in either regular or ship pattern.

Pattern	Size	Points to Inch	Per Doz.
No. 53A—Reg. Cross Cut	26 in.	8	$44.55
No. 53B—Reg. Cross Cut	26 in.	9	$44.55
No. 53C—Reg. Cross Cut	26 in.	10	$44.55
No. 53K—Ship Cross Cut	26 in.	8	$44.55
No. 53L—Ship Cross Cut	26 in.	9	$44.55
No. 53M—Ship Cross Cut	26 in.	10	$44.55

⅓ dozen in a box.

No. 65—Same as No. 53, except straight back. Ship pattern only.

Pattern	Size	Points to inch	Per Doz.
No. 65A—Ship Cross Cut	26 in.	8	$44.55
No. 65B—Ship Cross Cut	26 in.	9	$44.55
No. 65C—Ship Cross Cut	26 in.	10	$44.55
No. 65D—Ship Cross Cut	26 in.	11	$44.55
No. 65R—Ship Panel.	22 in.	9	$39.55
No. 65S—Ship Panel.	22 in.	10	$39.55
No. 65T—Ship Panel.	22 in.	11	$39.55

⅓ dozen in a box.

Regular Pattern.

Ship Pattern.

No. 51—Same as No. 53 except fitted with regular handle made of applewood, embossed and polished. Furnished in either regular or ship pattern.

Pattern	Size	Points to Inch	Per Doz.
No. 51A—Reg. Cross Cut	26 in.	8	$44.55
No. 51B—Reg. Cross Cut	26 in.	9	$44.55
No. 51C—Reg. Cross Cut	26 in.	10	$44.55
No. 51K—Ship Cross Cut	26 in.	8	$44.55
No. 51L—Ship Cross Cut	26 in.	9	$44.55
No. 51M—Ship Cross Cut	26 in.	10	$44.55
No. 51R—Reg. Panel.	22 in.	9	$39.55
No. 51S—Reg. Panel.	22 in.	10	$39.55
No. 51T—Reg. Panel.	22 in.	11	$39.55
No. 51V—Rip.	26 in.	5½	$44.55
No. 51W—Rip.	26 in.	6	$44.55

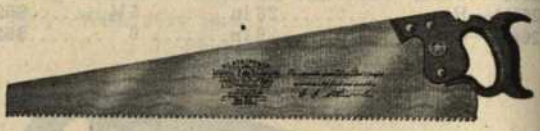
⅓ dozen in a box.

Atkins Hand Saws

No. 64—A very popular pattern. Silver Steel blade, damaskeen finish, straight back. Applewood handle, embossed and polished.

Pattern	Size	Points to inch	Per Doz.
No. 64K—Ship Cross Cut	26 in.	8	$55.35
No. 64L—Ship Cross Cut	26 in.	9	$55.35
No. 64M—Ship Cross Cut	26 in.	10	$55.35

⅓ dozen in a box.



No. 54—Made of Silver Steel, damaskeen finish, straight back. Beech handle with polished surface.

Pattern	Size	Points to inch	Per Doz.
No. 54K—Ship Cross Cut	26 in.	8	$39.20
No. 54L—Ship Cross Cut	26 in.	9	$39.20
No. 54M—Ship Cross Cut	26 in.	10	$39.20

⅓ dozen in a box.

No. 31—Cast steel, straight back. Beech handle with three screws.

Pattern	Size	Points to Inch	Per Doz.
No. 31A—Reg. Cross Cut	26 in.	8	$16.50
No. 31B—Reg. Cross Cut	26 in.	9	$16.50

½ dozen in a box.

No. 25—Cast steel, skew back. Beech handle with four screws.

Pattern	Size	Points to Inch	Per Doz
No. 25A—Reg. Cross Cut	26 in.	8	$22.50
No. 25B—Reg. Cross Cut	26 in.	9	$22.50

½ dozen in a box.

Atkins Nests of Saws

This nest includes one 12-inch keyhole blade, one 14-inch compass blade and one 18-inch pruning blade, with interchangeable handle.

No. 1.....Per doz., $26.65

¼ dozen in a box.

This nest includes one 10-inch keyhole blade, one 16-inch compass blade and one 14-inch special nail cutting blade, with interchangeable handle.

No. 4.....Per doz., $39.20

¼ dozen in a box.

Disston Nests of Saws

This nest includes one 10-inch keyhole blade, one 14-inch compass blade and one 16-inch table or pruning blade, with interchangeable handle.

No. 3—Set complete, weight each, 14 ozs...Per doz., $37.10

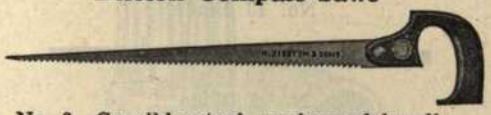
¼ dozen sets in a box.

This nest includes one 10-inch keyhole blade, one 16-inch compass blade and one 14-inch special nail and metal cutting blade, with interchangeable handle.

No. 7.....Per doz. sets, $32.20

¼ dozen sets in a box.

Disston Compass Saws



No. 2—Crucible steel, applewood handle.

No. 212—12-inch.....Per doz., $13.80
No. 214—14-inch.....Per doz., $14.20
No. 216—16-inch.....Per doz., $14.80

½ dozen in a box.

Atkins Compass Saws

Made of Silver Steel, specially tempered. Beech handle carved and polished.

No. 3A—14-inch.....Per doz., $9.20

½ dozen in a box.

Made of Silver Steel. Carved and varnished removable beech handle, attached with nickeled wing nut and screw. Hole punched in blade for screw.

No. 9—14-inch.....Per doz., $7.25

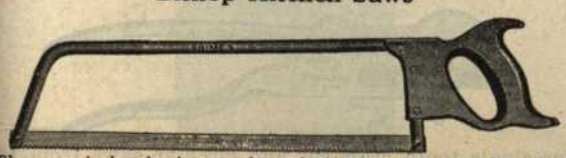
½ dozen in a box.

Sheffield quality. Polished. Beech handle, varnished edge. 8 points to inch.

No. 8—14-inch.....Per doz., $4.00

½ dozen in a box.

Bishop Kitchen Saws



The oval back is made of ½x¼-inch steel. ⅝-inch bright blade attached with wood screws.

No. 5—14-inch.....Per doz., $12.80

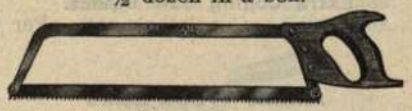
½ dozen in a box.

Atkins Kitchen Saws

Made of special steel, flat back, ½x$\frac{3}{16}$-inch, ⅝-inch bright blade. Handle is attached to back with 3 blued screws.

No. 88—14-inch.....Per doz., $7.00

½ dozen in a box.

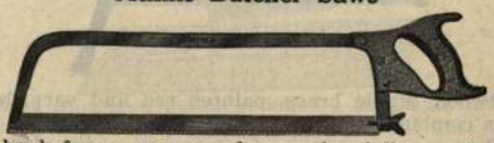


Extra high grade. Flat back ⅝x$\frac{3}{16}$-inch. Silver steel blade, bright, ¾ inch wide. Beech handle, attached with 3 nickeled wood screws.

No. 13—16-inch.....Per doz., $12.00

½ dozen in a box.

Atkins Butcher Saws



Flat back frame, square edge, made of fine spring steel, ¾ inch wide, ¼ inch thick. The blade is Atkins Special Steel, finished either bright or blue, as specified, ¾ inch wide. Beech handle with sanded sides, varnished edges. Fastened to frame with 3 nickeled screws.

No. 77A—18-inch.....Per doz., 18.85
No. 77B—20-inch.....Per doz., 20.10
No. 77C—22-inch.....Per doz., 21.30

⅓ dozen in a box.

Hand Saw Handles

No. 58 No. 51

We carry extra handles for saws for which there is most demand. Others can be furnished from factory with only slight delay. Prices do not include screws.

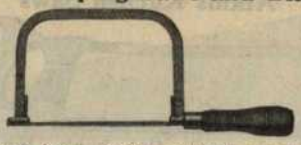
For Saw	Kind	Per doz.
No. 51	Atkins, 26-inch, Applewood.	$ 9.80
No. 58	Atkins, 26-inch, Beech, varnished.	$ 3.60
No. 58	Atkins, 26-inch, Beech, unvarnished.	$ 3.15
No. D8	Disston, 20-inch, Applewood.	$13.50
No. D8	Disston, 26-inch, Applewood.	$14.60
No. 12	Disston, 20-inch, Applewood.	$18.40
No. 12	Disston, 26-inch, Applewood.	$21.30

Saw Screws

No. 1 No. 2 Nos. 3 and 4 No. 8 No. 15

No. 1—Brass.....Per gro., $ 7.60
No. 2—Brass.....Per gro., $ 8.70
No. 3—Brass, small medallion.....Per gro., $12.00
No. 4—Brass, large medallion.....Per gro., $14.00
No. 8—Iron.....Per gro., $ 3.10
No 15—Brass.....Per gro., $ 7.50

Atkins Coping Saws and Blades



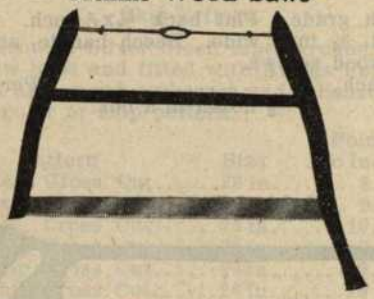
Frame is ⅜x$\frac{5}{16}$-inch cold rolled steel, nickeled and buffed. 7¼x4⅝ inches deep. Blade cuts at any angle. 1/6 dozen in a box.

No. 50.....Per doz., $9.90

Extra Coping Saw Blades.

No. 50Y.....Per doz., $0.50

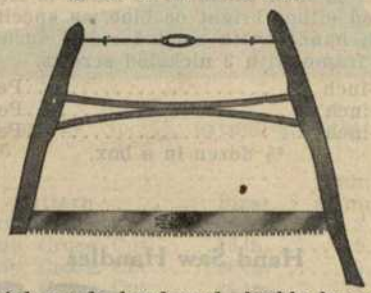
Atkins Wood Saws



Hardwood, single brace, painted red and varnished. A popular combination. Blades 30 inches long.

No. 302.....Per doz., $31.05

½ dozen in wood box.

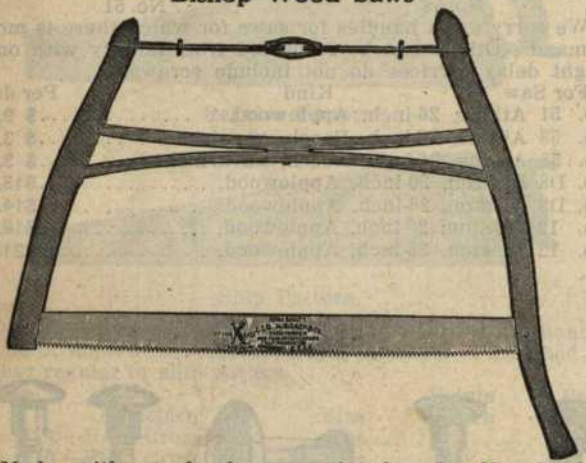


Selected high grade hardwood, double brace, single riveted, enameled red. Tuttle tooth. Blades 30 inches long.

No. 643.....Per doz., $33.10

½ dozen in wood box.

Bishop Wood Saws



Made with maple frame, painted red. No. 56 has bright, bow breasted plain tooth blade, 2¼ inches wide and 30 inches long. No. 55 has bright, straight breasted Champion tooth blade, 2¼ inches wide and 30 inches long.

No. 55.....Per doz., $27.60

No. 56.....Per doz., $26.50

½ dozen in wood box.

FOR CROSS CUT SAWS, CIRCULAR SAW BLADES AND SAW FRAMES, SEE PAGES 635-636.

Atkins Wood Saw Frames

Selected Hardwood, double brace, single riveted, painted red, varnished.

No. 600—Frames only.....Per doz., $9.20

½ dozen in wood box.

Atkins Wood Saw Blades and Rods

Saw Rod.

No. 43 Blade.

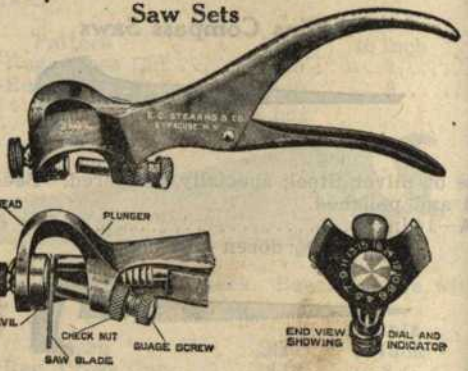
No. 2 Blade.

No. 2—Plain Tooth, Straight shape. Width 2 inches. Length 30 inches. Bright finish.....Per doz., $23.00

No. 43—Tuttle Tooth, Breasted shape. Width 1¾ ins. Length 30 ins. Bright finish.....Per doz., $24.40

22-inch Clipper Rods, rust-proof, for Wood Saw Frame.....Per gross, $37.45

Saw Sets

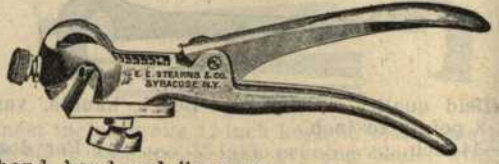


Rotatable anvil gives correct set by turning number of points to inch of saw to arrow.

For hand saws from widest down to ½ inch in width.

No. 395—Length 6 inches; weight 10 ounces....Each, $2.30

½ dozen in box.



For hand, band and jig saws.

No. 100—Length 6¾ inches; weight 10 ounces..Each, $1.20

½ dozen in box.

For single tooth cross-cut and circular saws from 12 to 20 gauge.

No. 104—Length 9 inches: weight 17 ounces...Each, $2.70

½ dozen in a box.

Mayhew Nail Sets

No. 434 Round Head Pattern.

Hand forged from finest crucible steel, electrically tempered and fully guaranteed. The new patented hand hold gives a good grip when the hand is oily. Four inches long. Packed one dozen assorted sizes, 3/32, 1/16, 3/32, 1/8 and 3/32 in a box.

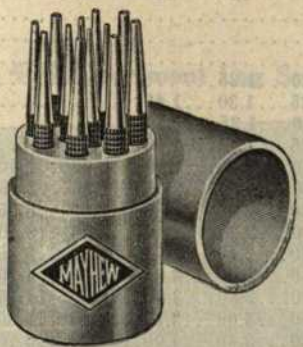
No. 434—Round Head Nail Sets.....Per doz., $2.20

No. 435 Square Head Pattern.

Same as No. 434 except has square head to prevent rolling. Packed one dozen, assorted sizes 3/32, 1/16, 3/32, 1/8 and 3/32 in a box.

No. 435—Square Head Nail Sets.....Per doz., $2.90

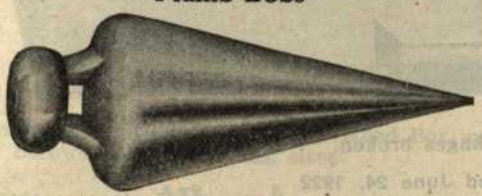
No. 434D Nail Set Assortment



This assortment contains 1 dozen No. 434 Nail Sets, assorted sizes.

No. 434D.....Each, $2.20

Plumb Bobs



A good moderately priced Plumb Bob. Furnished in 3 sizes, all nickel plated. Packed 1 dozen in a box.

No. 11— 4 oz. each.....Per doz., $4.30
No. 12—12½ oz. each.....Per doz., $5.20
No. 15—17 oz. each.....Per doz., $6.50

Carpenters' Aprons

Made of medium weight white canvas. 21 inches long, 20 inches wide. Extra strong strings. Eight big rivets.

No. C L. Nail Aprons.....Per doz., $13.00

Trowels

Made of good grade steel, tempered, ground and polished. Fitted with hardwood handle and polished steel ferrule. Weight, approximately 13 lbs. per dozen. Packed ½ dozen in a box.

	Length	Greatest Width	Per Doz.
No. 25A	10 inches	4¾ inches	12.00
No. 25B	10½ inches	5 inches	12.00
No. 25C	11 inches	5 inches	12.00

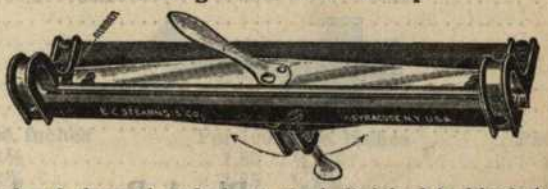
Made of good grade steel, tempered, ground and polished. Fitted with hardwood handle and polished steel ferrule. Weight, approximately 3½ lbs. per dozen. Packed ½ dozen in a box.

	Length	Greatest Width	Per Doz.
No. 43A	5 inches	2½ inches	6.00
No. 43B	5½ inches	2⅝ inches	6.00

Blade is tempered steel, polished. Malleable mounting fastened with four rivets. Plain handle. Weight, approximately 12 lbs. per dozen. Packed ½ dozen in a box.

	Length	Width	Per Doz.
No. 50A	10½ inches	4¾ inches	12.00
No. 50B	11 inches	4¾ inches	12.00

Folding Steel Saw Clamp



Made of channel and sheet steel, finished in black japan baked on. Parts not japanned are nickel plated. The back jaw is faced with rubber, which prevents vibration and makes the filing of saws practically noiseless. The lever is below the top of the clamp on the back of jaw and is therefore entirely out of the way. Length over all 12 inches, jaws 10½ inches, width 2¾ inches, weight 2¾ lbs. Packed 1 in a pasteboard box.

No. 500F.....Per doz., $28.50

Saw Clamps

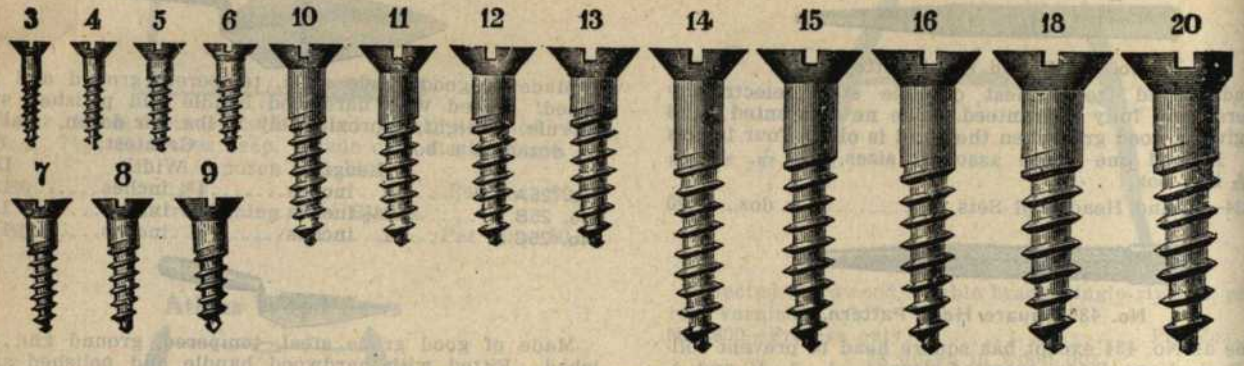
A light and durable clamp. 9½ in. jaws. Packed 3 dozen in a case.

No. 09½J..Per doz., $15.00

May be readily adjusted from Bench or adjusted to light while filing. 9½ in. jaws. 2 dozen in a case.

No. 39½J..Per doz., $20.00

Flat Head Bright Wood Screws



One gross in a package, no packages broken.

Manufacturers' Standard List Adopted June 24, 1922

List Per Gross

Ins.	Diam. No. 0	1	2	3	4	5	6	7	8	9	10	11	12	14	16	18	20	24
¼	.90	.90	.90	.90	.90													
⅜	.90	.90	.90	.90	.90	.90	.90	.90	.90									
½		.90	.90	.90	.90	.90	.90	.95	1.00	1.05	1.10							
⅝			.90	.90	.90	.95	.95	1.00	1.05	1.10	1.15	1.20	1.25					
¾			.90	.90	.95	.95	1.00	1.05	1.10	1.15	1.20	1.25	1.30	1.40				
⅞				.95	.95	1.00	1.05	1.10	1.15	1.20	1.25	1.30	1.35	1.50				
1				.95	1.00	1.05	1.10	1.15	1.20	1.25	1.30	1.35	1.40	1.60	1.85			
1¼					1.10	1.15	1.20	1.25	1.30	1.35	1.40	1.50	1.60	1.80	2.05	2.40		
1½					1.20	1.25	1.30	1.35	1.40	1.45	1.50	1.60	1.80	2.05	2.35	2.75	3.25	
1¾							1.40	1.45	1.50	1.60	1.70	1.80	2.00	2.25	2.60	3.05	3.60	
2							1.55	1.60	1.65	1.75	1.85	2.00	2.20	2.50	2.90	3.40	4.00	
2¼							1.75	1.80	1.85	1.95	2.05	2.20	2.40	2.75	3.20	3.75	4.40	
2½							1.95	2.00	2.05	2.15	2.25	2.40	2.60	3.00	3.50	4.10	4.80	
2¾									2.15	2.25	2.45	2.60	2.80	3.25	3.80	4.45	5.20	
3									2.45	2.55	2.65	2.80	3.00	3.50	4.10	4.80	5.60	7.40
3½											3.00	3.20	3.40	4.00	4.60	5.40	6.30	8.40
4													3.80	4.50	5.20	6.10	7.10	9.50
4½														5.10	5.90	6.90	8.00	10.70
5														5.75	6.70	7.80	9.00	11.90

Blued, Brass and Nickel Plated Wood Screws

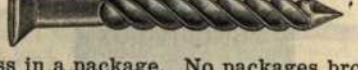
One gross in a package. No packages broken.

Manufacturers' Standard List Adopted June 24, 1922

List Per Gross

Diam. No.	Lgth., ins.	Rd. hd., blued steel	Rd. hd., brass	Flat hd., brass	Rd. hd., nickel plated
5	⅝	.95	1.40	1.40	.95
6	¾	1.00	1.70	1.70	1.00
7	⅝	1.00	1.75	1.75	1.00
8	¾	1.10	2.15	2.15	1.10
8	1	1.20	2.55	2.55	1.20
8	1¼	1.30	2.95	2.95	....
8	1½	1.40	3.35	3.35	....
8	2	1.65	4.25	4.25	....
9	¾	1.15	2.40	2.40	....
9	1	1.25	2.85	2.85	....
9	1¼	1.35	3.30	3.30	....
9	1½	1.45	3.75	3.75	....
9	1¾	1.60			....
9	2	1.35	4.75	4.75	....
10	¾	1.20	2.65	2.65	....
10	1	1.30	3.15	3.15	1.30
10	1¼	1.40	3.65	3.65	1.40
10	1½	1.50	4.20	4.20	....
10	1¾	1.70	4.80	4.80	....
10	2	1.85	5.35	5.35	....
10	2½	2.25	6.60	6.60	....
11	1	1.35	3.50	3.50	....
11	1¼	1.50	4.10	4.10	....
11	1½	1.60	4.70	4.70	....
11	1¾	1.80	5.40	5.40	....
11	2	2.00	6.00	6.00	....
12	1	1.40	3.90	3.90	....
12	1¼	1.60	4.60	4.60	1.60
12	1½	1.80	5.35	5.35	....
12	1¾	2.00	6.10	6.10	....
12	2	2.20	6.80	6.80	....

Drive Screws



1 gross in a package. No packages broken.

Diam. No. and Length, ins.	List Per Gro.	Diam. No. and Length, ins.	List Per Gro.
No. 8—¾-inch	1.10	No. 10—1¼-inch	1.40
No. 9—¾-inch	1.15	No. 12—1¼-inch	1.60
No. 9—⅞-inch	1.20		
No. 10— 1-inch	1.30	No. 12—1½-inch	1.80

Coach and Lag Screws

Manufacturers' Standard List Adopted September 1, 1923.

List Per Hundred.

Length, ins.	5/16	3/8	1/2	5/8
1½	2.25	2.70	....	....
2	2.45	3.00	4.15	6.00
2½	2.65	3.30	4.55	6.50
3	2.85	3.60	4.95	7.00
3½	3.05	3.90	5.35	7.50
4	3.25	4.20	5.75	8.00
4½	3.45	4.50	6.15	8.50
5	3.65	4.80	6.55	9.00
5½	3.85	5.10	6.95	9.50
6	4.05	5.40	7.35	10.00
6½	....	6.70	8.75	10.50
7	....	7.00	9.15	11.00
7½	....	7.30	9.55	.....
8	....	7.60	9.95	12.00
No. in pkg	50	50	50	25

No. 406 Assortment Lag Screws

This assortment, packed in Hinged Wood Box, contains 100 Lag Screws of the following sizes:

10	5/16x2	5	5/16x2½
20	3/8x2	10	½x3½
10	3/8x2½	20	3/8x3
20	½x3	5	½x4

Weight, 13 lbs. per assortment.

No. 406 Assortment ..... Each, $4.80

Sebco Expansion Shields

List Does Not Include Lag Screw.

Size of Screw, ins.	Length of Shield, ins.	Outside Dia. of Shield, ins.	Dia. of Drill required, ins.	Per 100
¼	1½	3/8	3/8	15.00
5/16	2	7/16	7/16	18.00
3/8	2	½	½	25.00
3/8	2¾	½	½	25.00
½	2	5/8	5/8	38.00
½	3⅜	11/16	11/16	38.00
5/8	3½	7/8	7/8	45.00

¼ to ½ inch, 100; larger sizes 50 in a package.

Flat and Round Head Stove Bolts

Manufacturers' Standard List Adopted Nov. 1, 1923.

List Per Hundred.

Length, inches	3/32	1/8	1/4	5/16	3/8	1/2
3/8	.85	.85	....	....	....	....
½	.85	.85	1.20	....	....	....
5/8	.85	.85	1.20	....	....	....
¾	.85	.85	1.20	1.75	2.65	....
7/8	.90	.90	1.25	1.80	2.75	....
1	.90	.90	1.30	1.85	2.85	9.50
1⅛	.95	.95	1.35	1.90	2.95	9.50
1¼	1.00	1.00	1.40	1.95	3.05	9.50
1⅜	1.05	1.05	1.45	2.00	3.15	9.50
1½	1.10	1.10	1.50	2.05	3.25	9.50
1¾	1.20	1.20	1.60	2.25	3.45	9.80
2	1.30	1.30	1.70	2.45	3.85	10.10
2¼	....	1.45	1.85	2.60	4.05	10.35
2½	....	1.60	2.00	2.75	4.25	10.65
2¾	....	1.70	2.10	2.90	4.40	10.90
3	....	1.80	2.20	3.05	4.65	.....
3½	....	2.00	2.40	3.40	5.15	.....
4	....	2.20	2.70	3.70	5.65	.....
4½	....	2.40	3.00	4.00	6.15	.....
5	....	2.60	3.30	4.40	6.65	.....
5½	....	2.80	3.60	4.80	7.15	.....
6	....	3.05	3.90	5.20	7.65	.....

100 in a package. No packages broken.

Round Head Nickel Plated Stove Bolts

Size, inches	Per 100	Size, inches	Per 100
5/16x½	1.85	¼x½	2.20
5/16x¾	1.85	¼x¾	2.20
5/16x1	1.90	¼x1	2.30

100 in a package. No packages broken.

Stove Bolt Nuts

Size, ins.	For Bolt, ins.	Per 100
5/16	5/16	.26
¼	¼	.43

100 in box, no boxes broken.

No. 32 Assortment Stove Bolts

This assortment is put up in pasteboard packages and contains 10 each of the following sizes with nuts all screwed on. 100 bolts in a carton, 25 cartons in a case.

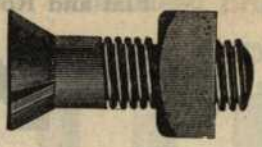
5/16x ¾-1	Flat Head
¼x ¾-1-1¼-1½	Flat Head
5/16x½-¾	Round Head
¼x ¾-1	Round Head

Weight, 2 lbs. per assortment.

No. 32 Assortment $1.00

Plow Bolts

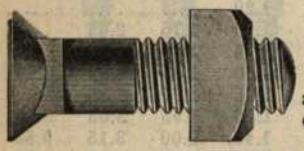
NO. 1 KEY HEAD



Packed 50 in a package. Will break packages on ½ and ⅝-inch diameters only.

Stock Sizes

⅜x¾, 1, 1¼, 1½, 1¾, 2, 2¼, 2½, 3
⅞x1, 1½, 2, 2½
½x1¼, 1½, 1¾, 2, 2¼, 2½
⅝x1½, 1¾, 2, 2¼, 2½, 3



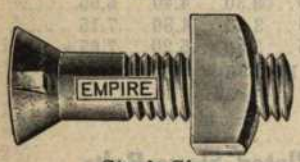
NO. 3 ROUND HEAD

Short square shoulder, 50 in a package. Will break packages on ½ and ⅝-inch diameter only.

Stock Sizes

⅞x1, 1¼, 1½
⅜x¾, 1, 1¼, 1½, 1¾, 2, 2¼, 2½, 2¾, 3
⅞x1, 1¼, 1½, 1¾, 2, 2½, 2¾, 3
½x1, 1¼, 1½, 1¾, 2, 2½, 3
⅝x1½, 1¾, 2, 2¼, 2½.

NO. 7 REVERSE KEY HEAD



Stock Sizes
⅜x1, 1¼, 1½
50 in a package
No packages broken

NO. 4 SQUARE HEAD

Stock Size
½x2
50 in a package
Will break packages

Manufacturers' Standard List on Plow Bolts

List Per Hundred

Length	⅛	⅜	⅞	½	⅞	⅝
¾ to 1	1.70	2.00	2.60	3.50	4.50	5.70
1¼	1.70	2.00	2.60	3.50	4.50	5.70
1½	1.80	2.10	2.75	3.70	4.75	6.00
1¾	1.90	2.20	2.90	3.90	5.00	6.30
2	2.00	2.30	3.05	4.10	5.25	6.60
2¼	2.10	2.40	3.20	4.30	5.50	6.90
2½	2.20	2.50	3.35	4.50	5.75	7.20
2¾	2.30	2.60	3.50	4.70	6.00	7.50
3	2.40	2.70	3.65	4.90	6.25	7.80
3¼	2.50	2.80	3.80	5.10	6.50	8.10
3½	2.60	2.90	3.95	5.30	6.75	8.40
3¾	2.70	3.00	4.10	5.50	7.00	8.70
4	2.80	3.10	4.25	5.70	7.25	9.00
4½	....	3.30	4.55	6.10	7.75	9.60

No. 25 Assortment Plow Bolts

Put up in packages of 50 bolts, as follows:

12 ⅜x1¼. No. 3 head
12 ⅜x1½. No. 3 head
6 ⅜x2½. No. 3 head
4 ⅞x1¼. No. 3 head
4 ⅞x1½. No. 3 head
2 ⅞x1¾. No. 3 head
5 ⅜x1¼. No. 1 head
5 ⅜x1½. No. 1 head

These are the popular selling sizes.

Weight, 4½ lbs. per assortment.

No. 25 Assortment.....$1.80

North Carriage Bolts

Cut Thread

Manufacturers' Standard List Adopted September 1, 1923.

List Per Hundred

Length, ins.	Diameter, inches ⅛	¼	⅜	⅜
1	1.00	1.00	1.40	1.90
1¼	1.00	1.00	1.40	1.90
1½	1.00	1.00	1.40	1.90
1¾	1.10	1.10	1.55	2.10
2	1.10	1.10	1.55	2.10
2¼		1.20	1.70	2.30
2½		1.20	1.70	2.30
2¾		1.30	1.85	2.50
3		1.30	1.85	2.50
3½		1.40	2.00	2.70
4		1.50	2.15	2.90
4½			2.30	3.10
5			2.45	3.30
5½			2.60	3.50
6			2.75	3.70

⅛ and ¼ inch, 100 in a package; ⅜ and ⅜ inch, 50 in a package. No packages broken.

Tire Bolts

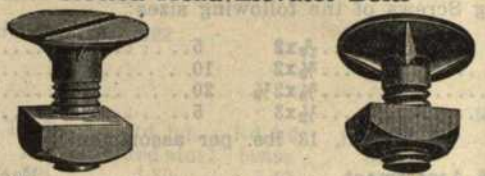
Manufacturers' Standard List.

List Per Hundred.

Length in Inches.	⅛	⅜	¼
1¼	.60	.60	.95
1½	.60	.60	.95
1¾	.65	.65	1.00
2	.70	.70	1.05
2¼	.75	.75	1.10
2½	.80	.80	1.15
2¾	..	..	1.20
3	.90	.90	1.25
3¼	..	..	1.30
3½	..	..	1.35
3¾	..	..	1.40
4	..	..	1.45

100 in a package, no packages broken.

Slotted Head Elevator Bolts



¼x½ inch.....Per 100, 2.20
¼x⅝ inch.....Per 100, 2.20
¼x¾ inch.....Per 100, 2.20
¼x⅞ inch.....Per 100, 2.30

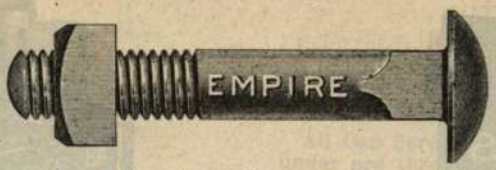
100 in a package, no packages broken.

Countersunk Head Elevator Bolts

¼x ¾ inch.....Per 100, 2.20
¼x ⅞ inch.....Per 100, 2.30
¼x1 inch.....Per 100, 2.30
¼x1¼ inch.....Per 100, 2.40
¼x1½ inch.....Per 100, 2.50

100 in a package, no packages broken.

Carriage Bolts



We carry in stock and regularly furnish cut thread on all sizes. We can also furnish rolled thread on sizes ⅜x6 and smaller when especially ordered. We will not break packages on ½ inch and smaller.

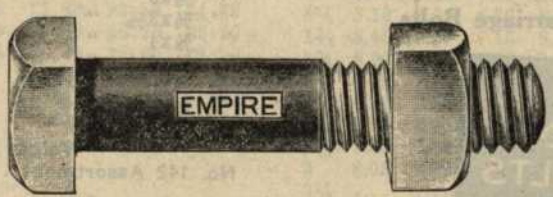
Manufacturers' Standard List Adopted September 1, 1923.
List Per Hundred

Length, ins.	3/16 & ¼	5/16	⅜	7/16	½	9/16 & ⅝	¾
¾ to 1½	1.00	1.40	1.90	2.50			
2	1.10	1.55	2.10	2.75			
2½	1.20	1.70	2.30	3.00	3.25	6.00	9.80
3	1.30	1.85	2.50	3.25	3.55	6.40	10.30
3½	1.40	2.00	2.70	3.50	3.85	6.80	10.80
4	1.50	2.15	2.90	3.75	4.15	7.20	11.30
4½	1.60	2.30	3.10	4.00	4.45	7.60	11.80
5	1.70	2.45	3.30	4.25	4.75	8.00	12.30
5½	1.80	2.60	3.50	4.50	5.05	8.40	12.80
6	1.90	2.75	3.70	4.75	5.35	8.80	13.30
6½	2.75	3.65	4.65	5.75	6.40	9.20	13.80
7	2.85	3.80	4.85	6.00	6.70	9.60	14.30
7½	2.95	3.95	5.05	6.25	7.00	10.00	14.80
8	3.05	4.10	5.25	6.50	7.30	10.40	15.30

Length, ins.	3/16 & ¼	5/16	⅜	7/16	½	9/16 & ⅝	¾
8½	3.15	4.25	5.45	6.75	7.60	10.80	15.80
9	3.25	4.40	5.65	7.00	7.90	11.20	16.30
9½	3.35	4.55	5.85	7.25	8.20	11.60	16.80
10	3.45	4.70	6.05	7.50	8.50	12.00	17.30
11	3.65	5.00	6.45	8.00	9.10	12.80	18.30
12	3.85	5.30	6.85	8.50	9.70	13.60	19.30
13	4.05	5.60	7.25	9.00	10.30	14.40	20.30
14	4.25	5.90	7.65	9.50	10.90	15.20	21.30
15	4.45	6.20	8.05	10.00	11.50	16.00	22.30
16	4.65	6.50	8.45	10.50	12.10	16.80	23.30
17	4.85	6.80	8.85	11.00	12.70	17.60	24.30
18	5.05	7.10	9.25	11.50	13.30	18.40	25.30
19	5.25	7.40	9.65	12.00	13.90	19.20	26.30
20	5.45	7.70	10.05	12.50	14.50	20.00	27.30

Approximately packed 3/16 and ¼-inch, 100; 5/16, ⅜, 7/16 and ½-inch up to 8 inches long, 50; larger and longer, 25 in a package.

Machine Bolts



We carry in stock and regularly furnish cut thread on all sizes. We can also furnish rolled thread on sizes ⅜x4 and smaller when specially ordered. We will not break packages on ½-inch and smaller.

Manufacturers' Standard List Adopted September 1, 1923.
List Per Hundred

Length, Inches	¼	5/16	⅜	7/16	½	9/16 & ⅝	¾	⅞	1	1⅛	1¼
1½	1.70	2.00	2.40	3.00	3.70	5.50	7.70	10.50	15.10	22.50	30.00
2	1.80	2.15	2.60	3.25	4.00	5.90	8.25	11.20	16.00	23.70	31.50
2½	1.90	2.30	2.80	3.50	4.30	6.30	8.80	11.90	16.90	24.90	33.00
3	2.00	2.45	3.00	3.75	4.60	6.70	9.35	12.60	17.80	26.10	34.50
3½	2.10	2.60	3.20	4.00	4.90	7.10	9.90	13.30	18.70	27.30	36.00
4	2.20	2.75	3.40	4.25	5.20	7.50	10.45	14.00	19.60	28.50	37.50
4½	2.30	2.90	3.60	4.50	5.50	7.90	11.00	14.70	20.50	29.70	39.00
5	2.40	3.05	3.80	4.75	5.80	8.30	11.55	15.40	21.40	30.90	40.50
5½	2.50	3.20	4.00	5.00	6.10	8.70	12.10	16.10	22.30	32.10	42.00
6	2.60	3.35	4.20	5.25	6.40	9.10	12.65	16.80	23.20	33.30	43.50
6½	3.70	4.50	5.40	6.50	7.70	9.50	13.20	17.50	24.10	34.50	45.00
7	3.80	4.65	5.60	6.75	8.00	9.90	13.75	18.20	25.00	35.70	46.50
7½	3.90	4.80	5.80	7.00	8.30	10.30	14.30	18.90	25.90	36.90	48.00
8	4.00	4.95	6.00	7.25	8.60	10.70	14.85	19.60	26.80	38.10	49.50
9	4.20	5.25	6.40	7.75	9.20	11.50	15.95	21.00	28.60	40.50	52.50
10	4.40	5.55	6.80	8.25	9.80	12.20	17.05	22.40	30.40	42.90	55.50
11	4.60	5.85	7.20	8.75	10.40	13.10	18.15	23.80	32.20	45.30	58.50
12	4.80	6.15	7.60	9.25	11.00	13.90	19.25	25.20	34.00	47.70	61.50
13			8.00	9.75	11.60	14.70	20.35	26.60	35.80	50.10	64.50
14			8.40	10.25	12.20	15.50	21.45	28.00	37.60	52.50	67.50
15			8.80	10.75	12.80	16.30	22.55	29.40	39.40	54.90	70.50
16			9.20	11.25	13.40	17.10	23.65	30.80	41.20	57.30	73.50
17					14.00	17.90	24.75	32.20	43.00	59.70	76.50
18					14.60	18.70	25.85	33.60	44.80	62.10	79.50
19					15.20	19.50	26.95	35.00	46.60	64.50	82.50
20					15.80	20.30	28.05	36.40	48.40	66.90	85.50

Size, Ins.	Approx. Packed
¼x3¾ to 10	100
¼x10 and up	50
5/16x¾ to 9½	50
5/16x10 and up	25
All ⅜ and 7/16	50

Size, Ins.	Approx. Packed
½x1 to 8	50
½x8½ and up	25
All ⅝ and ¾	25
All ⅞ and 1	Loose
All 1 and 1¼	Loose

No. 100 Assortment Machine Bolts

One hundred assorted sizes, put up in a hinge cover wooden case, as shown, and containing bolts as follows: 25 each ⅜x1½ and 2½; 20, ⅞x2; 10 each ⅜x2, ⅜x3, ⅞x3.

Weight, 11½ lbs. per assortment.

No. 100 Assortment.....Each, $4.40

No. 120 Assortment Carriage Bolts

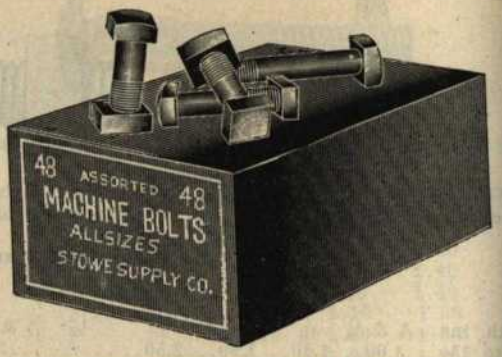
Round Head and Square Shoulder.

One hundred and twenty assorted sizes, put up in a hinge-cover wooden case, as shown, and containing bolts as follows: 10 each ¼x1½ and 2; ⅞x2, 2½, 3, 3½; ⅜x2½, 3, 4, 5; 5 each ½x3, 4, 5, 6.

Weight 17½ lbs. per assortment.

No. 120 Assortment.....Each, $4.60

No. 48 Assortment Machine Bolts



This assortment contains 48 Bolts, put up in a pasteboard box, and consists of the following staple sizes:

⅞x1¼, 1½, 2, 2½ ⅜x1¼, 1½, 2, 2½
⅞x1¼, 1½, 2, 2½ ½x1¼, 1½, 2, 2½

Weight 6 lbs. per assortment.

No. 48 Assortment.....Each, $1.80

Packed 25 assortments in a case.

No. 142 Assortment Machine Bolts

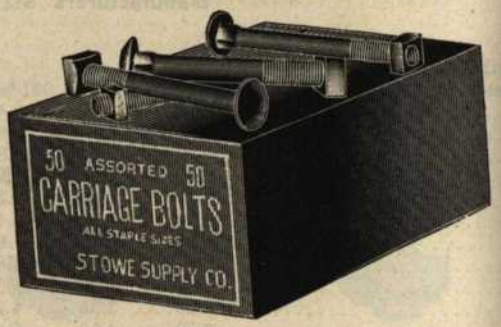
Contains 300 assorted Bolts of the most staple sizes. Packed in wood box. Each diameter separate, all nuts screwed tight, containing 10 each of following sizes:

⅜x1½ inch.	⅞x1½ inch.	½x1½ inch.
⅜x2 "	⅞x2 "	½x2 "
⅜x2½ "	⅞x2½ "	½x2½ "
⅜x3 "	⅞x3 "	½x3 "
⅜x3½ "	⅞x3½ "	½x3½ "
⅜x4 "	⅞x4 "	½x4 "
⅜x4½ "	⅞x4½ "	½x4½ "
⅜x5 "	⅞x5 "	½x5 "
⅜x5½ "	⅞x5½ "	½x5½ "
⅜x6 "	⅞x6 "	½x6 "

Weight 55 lbs. per assortment.

No. 142 Assortment.....Each, $15.00

No. 50 Assortment Carriage Bolts



This assortment contains 50 Bolts, put up in a pasteboard box, and consists of the following staple sizes.

¼x1½, 2, 2½, 3, 3½, 4
⅞x1½, 2, 2½, 3, 3½, 4
⅜x1, 2, 2½, 3, 3½, 4

Weight 4 lbs. per assortment.

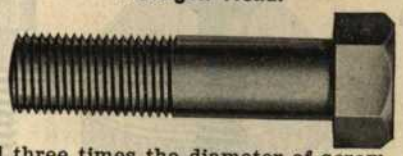
No. 50 Assortment.....Each, $1.30

Packed 25 assortments in a case.

Our customers will find our assortments of Bolts, Spring Cotters, Set Screws, Stove Bolts, etc., to be made up of good clean stock and not a lot of odds and ends of undesirable and unsalable stock. We have no remnants to dispose of under the guise of "assortments." We guarantee our assortments to be as represented. They are made up of the most desirable sizes for the accommodation of our customers.

S A E Cap Screws

Hexagon Head.



Threaded three times the diameter of screw.
Packed as follows:

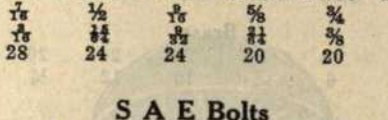
All ¼-inch	100
5/16x¾ to 2½-inch	50
5/16x2¾-inch and longer	50
⅜x¾ to 2½-inch	100
⅜x2¾-inch and longer	50
7/16x¾ to 2-inch	100
7/16x2¼-inch and longer	50
½x¾ to 1¼-inch	100
½x1½-inch and longer	50
9/16x¾ to 1½-inch	50
9/16x1¾-inch and longer	25

Manufacturers' Standard List Adopted February 1, 1924.

List Per 100.

Length, ins.	Diameter of Screw, ins. ¼	5/16	⅜	7/16	½	9/16	⅝
¾	4.35	4.85	5.80	7.50	9.55	.....	.....
1	4.70	5.25	6.20	7.90	9.95	15.85	16.40
1¼	5.10	5.60	6.70	8.50	10.80	16.10	16.65
1½	5.45	6.00	7.15	9.10	11.50	16.35	16.90
1¾	5.90	6.55	7.85	9.75	12.35	17.50	18.10
2	6.35	7.15	8.50	10.45	13.15	18.55	19.15
2¼	6.80	7.75	9.15	11.20	14.05	19.80	20.40
2½	7.20	8.35	9.80	11.95	15.00	20.85	21.30
2¾	7.60	8.90	10.50	12.65	15.90	22.30	23.00
3	8.05	9.50	11.15	13.40	17.00	23.80	24.55
3½	....	....	....	....	14.90	19.30	26.20	26.90
4	....	....	....	....	16.35	21.80	28.60	29.20
Dia. Hd...	7/16	½	9/16	⅝	¾	⅞	1⅛
Hgt. Hd...	7/32	17/64	9/32	11/32	⅜	7/16	½
No. threads	28	24	24	20	20	18	18

S A E Bolts

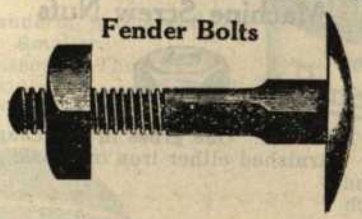


Packed same as S A E Cap Screws.

Price Per 100 Complete with Nuts.

Length, ins.	Diameter, ins. ¼	5/16	⅜	7/16	½	9/16	⅝
¾	$7.60	$9.20	$11.00	$13.80	$15.90	.....	.....
1	$8.20	$9.80	$11.50	$14.70	$16.50	$24.50	$30.60
1¼	$8.60	$10.20	$12.00	$15.50	$17.70	$24.50	$30.60
1½	$9.00	$10.70	$12.40	$16.50	$18.80	$25.40	$30.60
1¾	$9.50	$11.20	$13.00	$17.50	$19.90	$26.80	$32.20
2	$9.90	$12.10	$13.70	$18.40	$21.00	$28.20	$33.90
2¼	....	$13.10	$14.40	$19.60	$22.10	$30.22	$35.80
2½	....	$13.90	$15.20	$20.50	$23.30	$32.10	$37.70
2¾	....	....	$16.40	$21.40	$24.30	$33.60	$39.90
3	....	....	$17.40	$22.42	$25.50	$34.10	$42.10
3½	....	....	....	$25.20	$28.50	$39.10	$47.00
4	....	....	....	$27.90	$31.50	$44.00	$52.40

Fender Bolts



Size, ins.	Per 100
¼x1	3.00
¼x1¼	3.10
¼x1½	3.20
¼x1¾	3.30
¼x2	3.40
¼x1	3.00
¼x1¼	3.10
¼x1½	3.20
¼x1¾	3.30

Size, ins	Per 100
¼x2	3.40
¼x2¼	3.50
¼x2½	3.60
5/16x1	4.00
5/16x1½	4.00
5/16x2	4.10
5/16x2½	4.40
5/16x3	4.70

U. S. Standard Cap Screws

Hexagon Head.

All Cap Screws 1-inch diam. and less. 4 inches long and under are threaded three-quarters of the length.
Larger sizes threaded one-half of the length.
On orders for ½-inch size we send 13 threads to the inch unless otherwise specified.

Packed as Follows:

¼ and 5/16-inch	100
⅜x¾ to 2-inch	100
⅜x2¼-inch and longer	50
7/16x¾ to 2-inch	100
7/16x2¼-inch and longer	50
½x¾ to 1¼-inch	100
½x1½-inch and longer	50
9/16x1 to 1½-inch	50
9/16x1¾-inch and longer	25
⅝x1 to 1¼-inch	50
⅝x1½-inch and longer	25
¾-inch, all lengths	25
Larger sizes	25

Manufacturers' Standard List Adopted February 1, 1924.

List Per 100.

Diameter of Screw, Inches.

Lgth., ins.	¼	5/16	⅜	7/16	½	9/16	⅝	¾	⅞
¾	4.35	4.85	5.80	7.50	9.55	.....	.....	.....	.....
⅞	4.55	5.00	6.00	7.70	9.75	.....	.....	.....	.....
1	4.70	5.25	6.20	7.90	9.95	15.85	16.40	.....	.....
1¼	5.10	5.60	6.70	8.50	10.80	16.10	16.65	26.55	.....
1½	5.45	6.00	7.15	9.10	11.50	16.35	16.90	26.85	41.50
1¾	5.90	6.55	7.85	9.75	12.35	17.50	18.10	27.15	41.90
2	6.35	7.15	8.50	10.45	13.15	18.55	19.15	27.45	42.30
2¼	6.80	7.75	9.15	11.20	14.05	19.80	20.40	29.00	45.40
2½	7.20	8.35	9.80	11.95	15.00	20.85	21.30	30.55	48.40
2¾	7.60	8.90	10.50	12.65	15.90	22.30	23.00	32.10	51.50
3	8.05	9.50	11.15	13.40	17.00	23.80	24.55	33.70	54.30
3¼	....	....	.....	14.15	18.20	24.95	25.70	35.80	56.60
3½	....	....	.....	14.90	19.30	26.20	26.90	38.00	58.65
3¾	....	....	.....	15.65	20.55	27.40	28.10	40.20	60.65
4	....	....	.....	16.35	21.80	28.60	29.20	42.25	62.85
4¼	....	....	.....	.....	.....	.....	30.40	45.85	67.35
4½	....	....	.....	.....	.....	.....	31.65	49.40	72.00
4¾	....	....	.....	.....	.....	.....	.....	52.95	76.60
Thds. to inch	20	18	16	14	12 &13	12	11	10	9

Length is from under head to extreme point.

Wheel Bolts

For Automobile Hubs

Fin Neck

Square Neck

Prices apply to either pattern.

Size, ins.	Per 100
*⅜x2⅛	2.30
⅜x2½	2.30
⅜x3	2.50
⅜x3½	2.70
7/16x2½	3.00
7/16x3	3.25
7/16x3½	3.50
½x2½	3.25
½x3	3.55
½x3½	3.85

*Size used on Ford.

Cap Screw Assortments

Containing sizes ¼x1 to ⅜x1½-inch.
No. 6—50 Assorted U. S. Standard Cap Screws.....$2.20
No. 7—50 Assorted SAE Cap Screws.....$2.10

Weight 15 lbs. per assortment.
Containing sizes ¼x¾ to ½x2-inch.
No. 101—100 Assorted U. S. Standard Cap Screws....$6.00
No. 102—100 Assorted SAE Cap Screws.....$5.90

Screw and Nut Assortments

Containing Cap Screws ¼x¾ to ½x2-inch, and Semi-Finished Nuts ¼ to ½-inch. Weight 20 lbs. per assortment.
No. 103—100 Assorted U. S. Standard Cap Screws and 100 Semi-finished Hex. Nuts to fit.....$8.00
No. 104—Same as No. 103 except SAE Cap Screws and Nuts.....$7.80

Socket Set Screws and Wrenches

Steel, Cup Point, Case Hardened. U. S. Standard Thread. When ordered in full boxes wrench is included free.

Size, ins.	Threads to in.	No. in Box	Per 100
7/16x11/32	18	100	3.00
3/8x7/16	16	100	3.30
7/16x1/2	14	100	3.60
1/2x9/16	13	100	3.90
9/16x5/8	12	50	4.70
5/8x11/16	11	50	5.40
3/4x7/8	10	50	8.40

Socket Set Screw Wrenches extra.....Each, .23

Machine Screws

Manufacturers' Standard List Adopted June 15, 1921.
1 gross in a package. No packages broken.
List Per Gross.

Threads per inch	40	32	32	24	24	20	18	16
Diam. No.	4	6	8	10	12	¼	5/16	⅜
Iron. Length								
⅛	.30	.35	...	...	...	...	...	...
3/16	.30	.35	.40	...	...	...	...	...
¼	.30	.35	.40	.60	...	...	...	...
5/16	.32	.37	.44	.65	.75	1.15	...	...
⅜	.32	.37	.44	.65	.75	1.15	...	...
7/16	.34	.39	.48	.70	.80	1.20	...	...
½	.34	.39	.48	.70	.80	1.20	2.00	2.40
⅝	.37	.42	.52	.75	.85	1.25	2.10	2.50
¾	.41	.46	.56	.80	.90	1.30	2.20	2.60
⅞	.45	.50	.60	.85	.95	1.40	2.30	2.70
1	.50	.55	.65	.90	1.00	1.50	2.40	2.80
1⅛	.55	.60	.70	1.00	1.10	1.60	2.60	3.00
1¼	.60	.65	.75	1.10	1.20	1.75	2.80	3.20
1½	.70	.75	.85	1.30	1.40	2.10	3.20	3.60
1¾	...	.95	1.05	1.50	1.60	2.50	3.60	4.20
2	...	1.15	1.25	1.70	1.80	2.90	4.00	4.60

Threads per inch	40	32	32	24	24	20	18	16
Diam. No.	4	6	8	10	12	¼	5/16	⅜
Brass. Length								
⅛	.36	.46	...	...	...	...	...	...
3/16	.36	.46	.70	...	...	...	...	...
¼	.36	.46	.70	1.00	...	...	...	...
5/16	.38	.49	.75	1.05	1.35	2.80	...	...
⅜	.40	.52	.80	1.10	1.45	2.90	...	...
7/16	.42	.55	.85	1.15	1.55	3.05	...	...
½	.44	.58	.90	1.25	1.65	3.20	5.00	5.75
⅝	.50	.66	1.00	1.45	1.85	3.50	5.50	6.50
¾	.56	.74	1.10	1.65	2.05	3.80	6.00	6.70
⅞	.62	.82	1.20	1.85	2.25	4.10	6.50	7.40
1	.70	.90	1.30	2.05	2.45	4.40	7.00	8.50
1⅛	.80	1.05	1.45	2.20	2.65	4.65	7.50	9.00
1¼	.90	1.20	1.60	2.35	2.85	4.90	8.00	9.90
1½	1.10	1.50	1.90	2.65	3.25	5.50	9.00	12.00
1¾	...	1.90	2.30	3.05	3.75	6.20	10.00	12.70
2	...	2.30	2.70	3.45	4.25	7.00	11.00	13.50

Approximate Comparison of Diameters Machine Screws.

No.	4	6	8	10	12	14	16	18	20	24
Ins.	1/4	5/32	3/16	7/32	1/4	17/64	9/32	5/16	3/8

*Fillister Head Screws furnished from factory only and not carried in stock.

Machine Screw Nuts

Hexagon. Threaded. One gross in a package. No packages broken. Furnished either iron or brass.

Diam. No. and threads to inch	Per Gross Iron	Brass
No. 4—36	.36	1.08
No. 6—32	.36	1.08
No. 8—32	.40	1.22
No. 10—24	.43	1.30
No. 10—32	.43	....
No. 12—24	.48	1.44
No. 14—20	.55	1.66
No. 16—18	.72	....
No. 18—18	.94	....
No. 20—16	1.22	....
No. 24—16	1.58	....

Round Can Assortments

¼ Inch No. 4 to 1½ Inch No. 14.
No. 19—50 assorted Round Head Brass Machine Screws with Hexagon Nuts.....$1.70
Weight per assortment ⅞ lb.

¼ Inch No. 8 to 1½ Inch No. 16.
No. 9—100 assorted Flat Head Iron Machine Screws..$1.10
¼ Inch No. 8 to 1½ Inch No. 16.
No. 5—100 assorted Round Head Iron Machine Screws.$1.10
Weight per assortment 1 lb.

No. 6 to No. 16.
No. 4—100 assorted Iron Machine Screw Nuts.....$1.20
Weight per assortment ½ lb.

U. S. Standard, ⅜x1¼ and Smaller.
No. 8—50 assorted Thumb Screws.....$4.40
Weight per assortment 1⅞ lbs.

⅜ Inch and Smaller.
No. 20—50 assorted Threaded Malleable Thumb Nuts.$2.00
Weight per assortment 2 lbs.

Set Screws

Square Head Cup Point.
Case Hardened.

On orders for ½-inch size we send 13 threads to the inch unless otherwise specified.

Packed as follows:

¼, 5/16 and ⅜-inch	100
7/16x½ to 2-inch	100
7/16x2¼-inch and longer	50
½x⅝ to 2-inch	100
½x2¼-inch and longer	50
9/16 inch, all lengths	50
⅝x¾ to 3-inch	50
¾x1 to 2½-inch	50
¾x2¾-inch and longer	25
⅞x1 to 2½-inch	50
⅞x2¾-inch and longer	25

Manufacturers' Standard List Adopted February 1, 1924.

List Per 100

Length, ins.	Diam of Screw, ins. ¼	5/16	⅜	7/16	½	9/16	⅝	¾	⅞
½	2.80	3.15	3.65	....	.....	.....	.....	.....	.....
¾	2.90	3.25	3.75	5.45	6.65	11.15	11.55	.....	.....
1	3.25	3.55	4.30	5.65	6.85	11.55	11.95	21.10	.....
1¼	3.60	3.90	4.80	6.15	7.60	11.75	12.15	21.50	35.70
1½	3.95	4.20	5.25	6.65	8.35	11.95	12.35	21.90	36.20
1¾	4.25	4.70	5.90	7.25	9.10	12.90	13.30	22.30	36.70
2	4.55	5.20	6.55	7.90	9.80	13.80	14.20	22.70	37.20
2¼	4.80	5.65	7.15	8.65	10.60	14.85	15.30	24.40	39.80
2½	5.10	6.15	7.75	9.45	11.40	16.00	16.50	26.10	42.30
2¾	5.35	6.60	8.40	10.15	12.15	17.15	17.65	27.80	44.80
3	5.65	7.10	9.00	10.90	12.35	18.25	18.85	29.35	47.40
Threads to in.	20	18	16	14	12 & 13	12	11	10	9

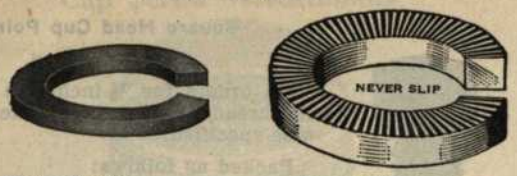
Assortment Set Screws

This assortment, packed in a wood box, consists of 100 Set Screws and is put up with a variety of sizes, as follows:

3.....¼x ½	10.....⅜x ¾	3.....7/16x1½
3.....¼x ¾	10.....⅜x1	5.....½x ¾
3.....¼x1	10.....⅜x1¼	8.....½x1
3.....5/16x ½	5.....⅜x1½	5.....½x1¼
3.....5/16x ¾	3.....7/16x ¾	5.....½x1½
3.....5/16x1	3.....7/16x1	3.....½x1¾
3.....5/16x1¼	3.....7/16x1¼	3.....½x2
3.....⅜x ½		

No. 22 Assortment.....Each, $3.20
Weight per assortment 5½ lbs.

Lock Washers



Plain Pattern — Never-Slip Pattern

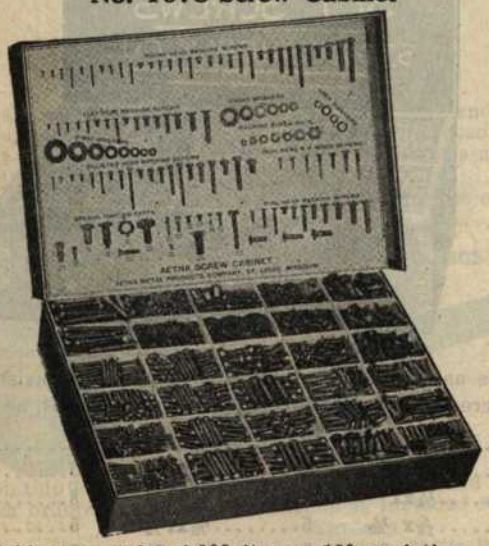
Furnished in three types, Special Light S. A. E., S. A. E Standard and Special Heavy S. A. E.
Packed 100 or 1,000 in box.

Size, ins.	Special Light S. A. E. Size steel	List per 1,000
No. 10	$\frac{3}{16}$x$\frac{3}{64}$	1.70
¼	$\frac{3}{32}$x$\frac{3}{64}$	2.70
$\frac{5}{16}$	$\frac{1}{8}$x$\frac{3}{64}$	4.00
⅜	$\frac{1}{8}$x$\frac{1}{16}$	5.00
$\frac{7}{16}$	$\frac{3}{32}$x$\frac{1}{16}$	6.35
½	$\frac{1}{32}$x$\frac{1}{16}$	7.35
$\frac{9}{16}$	$\frac{3}{16}$x$\frac{3}{32}$	10.00
⅝	$\frac{1}{32}$x$\frac{3}{32}$	11.35
¾	¼x⅛	28.35
⅞	$\frac{1}{32}$x$\frac{3}{32}$	51.35

Size, ins.	S. A. E. Standard. Size steel	List per 1,000
No. 10	$\frac{1}{16}$x$\frac{3}{64}$	1.35
¼	$\frac{3}{32}$x$\frac{1}{16}$	3.00
$\frac{5}{16}$	$\frac{1}{8}$x$\frac{1}{16}$	4.35
⅜	$\frac{1}{8}$x$\frac{3}{32}$	5.70
$\frac{7}{16}$	$\frac{3}{32}$x⅛	8.35
½	$\frac{1}{32}$x⅛	10.35
$\frac{9}{16}$	$\frac{3}{16}$x⅛	11.35
⅝	$\frac{1}{32}$x$\frac{3}{32}$	23.70
¾	¼x$\frac{3}{16}$	46.00
⅞	$\frac{1}{32}$x$\frac{1}{16}$	53.00

Size, ins.	Special Heavy S. A. E. Size steel	List per 1,000
No. 10	$\frac{1}{16}$x$\frac{1}{16}$	1.70
¼	$\frac{3}{32}$x$\frac{3}{64}$	3.35
$\frac{5}{16}$	$\frac{1}{8}$x$\frac{3}{32}$	5.00
⅜	$\frac{1}{8}$x⅛	6.35
$\frac{7}{16}$	$\frac{3}{32}$x$\frac{3}{32}$	9.70
½	$\frac{1}{32}$x$\frac{1}{32}$	19.70
$\frac{9}{16}$	$\frac{3}{16}$x$\frac{3}{16}$	23.35
⅝	$\frac{1}{32}$x$\frac{1}{32}$	27.35
¾	¼x¼	52.35
⅞	$\frac{1}{32}$x$\frac{1}{32}$	62.35

No. 1078 Screw Cabinet



This Cabinet contains 1,000 items—130 varieties. Special Ignition Screws, Fibre Washers, Brass Washers, Machine Screw Nuts, Oval Head N. P. Wood Screws, Lock Washers, Standard Machine Screws of Brass and Iron in a variety of sizes. An excellent assortment for Service Stations, Garages and Repair Shops.

No. 1078—Screw Cabinet.....Each, $15.00
Weight 5 lbs. per assortment.

Assortments Neverslip Lock Washers

The contents of the assortments listed below are most commonly used and have been approved by the Society of Automotive Engineers. All three assortments are put up in screw cans.

25 S. A. E. Standard Lock Washer Assortment consists of:	50 S. A. E. Standard Lock Washer Assortment consists of:
2—No. 10 $\frac{3}{16}$x$\frac{3}{64}$.	5—No. 10 $\frac{3}{16}$x$\frac{3}{64}$.
5—¼ $\frac{3}{32}$x$\frac{1}{16}$.	11—¼ $\frac{3}{32}$x$\frac{1}{16}$.
5—$\frac{5}{16}$ ⅛x$\frac{1}{16}$.	11—$\frac{5}{16}$ ⅛x$\frac{1}{16}$.
5—⅜ ⅛x$\frac{3}{32}$.	11—⅜ ⅛x$\frac{3}{32}$.
3—$\frac{7}{16}$ $\frac{3}{32}$x⅛.	4—$\frac{7}{16}$ $\frac{3}{32}$x⅛.
3—½ $\frac{1}{32}$x⅛.	5—½ $\frac{1}{32}$x⅛.
2—⅝ $\frac{1}{32}$x$\frac{3}{32}$.	3—⅝ $\frac{1}{32}$x$\frac{3}{32}$.
No. 539 Assmt..Each, $0.36	**No. 540 Assmt..Each, $0.75**

100 S. A. E. Standard Lock Washer Assortment consists of:

10—No. 10 $\frac{1}{16}$x$\frac{3}{64}$.	10—$\frac{7}{16}$ $\frac{3}{32}$x⅛.
20—¼ $\frac{3}{32}$x$\frac{1}{16}$.	10—½ $\frac{1}{32}$x⅛.
20—$\frac{5}{16}$ ⅛x$\frac{1}{16}$.	10—⅝ $\frac{1}{32}$x$\frac{3}{32}$.
20—⅜x$\frac{3}{32}$.	

No. 541 Assmt.....Each, $1.40

Garage Assortment Neverslip Lock Washers

This assortment contains 530 lock washers to fit all sizes from $\frac{3}{16}$ to ¾-inch bolts. Each size is in a separate compartment, quantities of sizes in proper proportion.

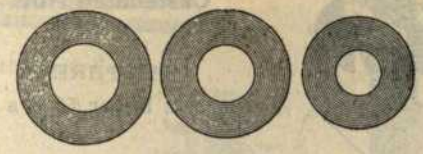
No. 5 Assortment.....Each, $3.20
Weight 4 lbs. per assortment.

Assortment Lock Washers

This assortment contains 1000 Lock Washers to fit all sizes from $\frac{3}{16}$ to ¾-inch bolts. Each size in separate compartment, quantities of sizes in proper proportion.

No. 116 Assortment.....Each, $7.50
Weight 10 lbs. per assortment.

Wrought Washers



For Bolt, ins.	Dia., ins.	Hole, ins.	Gauge No.	No. in lb.	List per 100 lbs.
3/16	5/16	1/4	18	394	14.00
1/4	3/4	5/16	16	156	12.20
5/16	7/8	3/8	16	112	11.40
3/8	1	7/16	14	68	10.50
7/16	1 1/4	1/2	14	43	9.80
1/2	1 3/8	9/16	12	26	9.40
9/16	1 1/2	5/8	12	22	9.30
5/8	1 3/4	11/16	10	13	9.20
3/4	2	13/16	9	9	9.10
7/8	2 1/4	15/16	8	7.8	9.00
1	2 1/2	1 1/16	8	5.6	9.00
1 1/8	2 3/4	1 1/4	8	4.7	9.00
1 1/4	3	1 3/8	8	3.6	9.20
1 1/2	3 1/2	1 5/8	7	2.5	9.20
1 3/4	4	1 7/8	7	1.9	9.50
2	4 1/2	2 1/8	7	1.6	9.50

For less than full kegs the following extras are to be added to full keg prices:

Full Kegs (200 lbs.)	Base
100-lb. Kegs	Extra per 100 lbs. .50
50 to 100-lb. lots	Extra per 100 lbs. 1.00
25 to 50-lb. lots	Extra per 100 lbs. 1.50
5 to 25-lb. lots	Extra per 100 lbs. 2.75

No. 201 Assortment Wrought Washers

The assortment consists of 5 pounds of the following staple sizes of Wrought Washers: 1/4, 5/16, 3/8, 7/16 and 1/2-inch.

No. 201 Assortment. . .Each, $1.10

Weight per assortment 5 lbs.

No. 119 Assortment Nuts.

The assortment consists of 5 lbs. of the following Square Threaded Nuts: 1/4, 5/16, 3/8, 7/16 and 1/2-inch.

No. 119 Assortment.....Each, $2.30
Weight per assortment 5 1/4 lbs.

Hot Pressed Hexagon Nuts

U. S. S. EXACT, THREADED.

Bolt Size, ins.	List per 100 lbs. U. S. S. Exact
1/4	22.50
5/16	20.00
3/8	15.60
7/16	14.30
1/2	13.50
9/16	13.50
5/8	12.40
3/4	11.00
7/8	10.80
1	10.80
1 1/8	10.80
1 1/4	10.80
1 3/8	11.00
1 1/2	11.20
1 3/4	11.70
2	12.30
2 1/4	13.00
2 1/2	13.90

For less than full kegs, the following extras are to be added to full keg prices:

Full kegs (200 lbs.)	Base
100-lb. kegs	Extra per 100 lbs., .50
25 to 100-lb. lots	Extra per 100 lbs., 1.00
5 to 25-lb. lots	Extra per 100 lbs., 2.50
For oversize Nuts 5/16 and smaller	Net extra per 100 lbs., 2.00
For oversize Nuts 5/8 and larger	Net extra per 100 lbs., 1.00

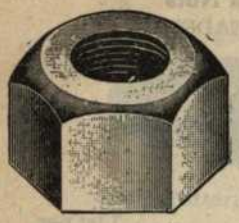
Hot Pressed Square Nuts

U. S. S. EXACT, THREADED.

Bolt Size, ins.	List per 100 lbs. U. S. S. Exact
3/16	16.00
1/4	15.00
5/16	13.50
3/8	11.60
7/16	10.90
1/2	10.70
9/16	10.70
5/8	10.00
3/4	9.20
7/8	9.00
1	9.00
1 1/8	9.00
1 1/4	9.00
1 1/2	9.40
1 3/4	10.00
2	10.60
2 1/4	11.10
2 1/2	11.80

For less than full kegs, the following extras are to be added to the full keg prices:

Full kegs (200 lbs.)	Base
100 lb. kegs	Extra per 100 lbs., .50
25 to 100-lb. lots	Extra per 100 lbs., 1.00
5 to 25-lb. lots	Extra per 100 lbs., 2.50
For oversize Nuts 5/16 and smaller	Net extra per 100 lbs., 2.00
For oversize Nuts 5/8 and larger	Net extra per 100 lbs., 1.00



Semi-Finished Hexagon Nuts

5/16 to 3/8, 100; larger, 50 in a box.

U. S. STANDARD THREAD.

For Bolt, ins.	Width ins.	Thickness, ins.	Threads, to inch	Per 100 pcs.
5/16	9/16	5/16	24	2.00
1/4	1/2	1/4	20	2.00
5/16	17/32	5/16	18	2.50
3/8	11/16	3/8	16	3.25
7/16	25/32	7/16	14	4.10
1/2	7/8	1/2	12	5.00
1/2	7/8	1/2	13	5.00
5/16	31/32	5/16	12	6.00
5/8	1 1/16	5/8	11	6.50
3/4	1 1/4	3/4	10	9.50
7/8	1 7/16	7/8	9	13.50
1	1 5/8	1	8	20.00
1 1/8	1 13/16	1 1/8	7	27.00
1 1/4	2	1 1/4	7	38.00

SAE THREAD.

For Bolt, ins.	Width ins.	Thickness, ins.	Threads, to inch	Per 100 pcs.
1/4	7/16	7/32	28	2.00
5/16	1/2	17/64	24	2.50
3/8	9/16	21/64	24	3.25
7/16	5/8	3/8	20	4.10
1/2	3/4	7/16	20	5.00
9/16	7/8	31/64	18	6.00
5/8	15/16	33/64	18	6.50
3/4	1 1/16	21/32	16	9.50
7/8	1 1/4	49/64	14	13.50
1	1 7/16	7/8	14	20.00

Assortment Hexagon Nuts

Semi-finished hexagon nuts in wooden compartment box.

U. S. STANDARD.

500 nuts, 1/4 to 3/4 in.
No. 105. Each, $12.00
400 nuts, 1/4 to 1 in.
No. 107. Each, $11.30

SAE

500 nuts, 1/4 to 3/4 in.
No. 106. Each, $11.00
400 nuts, 1/4 to 1 in.
No. 108. Each, $10.40

Semi-finished in screw-top can.

U. S. STANDARD.

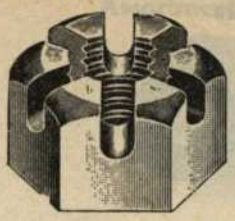
50 assorted, 1/4 to 5/8 in.

No. 2.....Each, $1.20
Weight per assortment 2 lbs.

SAE

50 assorted, 1/4 to 5/8 in.

No. 3.....Each, $1.10
Weight per assortment 1 lb.



Semi-Finished Castellated Nuts

SAE THREAD.

1/4 to 3/4, 100; larger, 50 in a package.

For bolt, ins.	Threads to inch	Height, ins.	Diam., ins.	Per 100
1/4	28	9/32	7/16	$ 1.50
5/16	24	21/64	1/2	$ 1.70
3/8	24	13/32	9/16	$ 2.00
7/16	20	29/64	5/8	$ 2.50
1/2	20	9/16	3/4	$ 3.50
9/16	18	33/64	7/8	$ 4.60
5/8	18	37/64	15/16	$ 6.00
11/16	16	41/64	1	$ 8.00
3/4	16	13/16	1 1/16	$ 9.20
7/8	14	29/32	1 1/4	$11.50
1	14	1	1 7/16	$18.20

Assortment Castellated Nuts

50 assorted Castellated Nuts, SAE, 1/4 to 5/8-inch.
No. 18 Assortment.....Each, $1.60
Weight per assortment 1 1/4 lbs.

Utility Nut Display Board

A practical assortment of standard, semi-finished and castellated nuts. Board holds 347 nuts and is 11½x15½ inches. Can stand on counter or shelf.

No. 562—Board complete.....Each, $11.90
Weight per assortment 12½ lbs.

Spring Cotters

Standard Pattern

CAMPBELL Hammer-Lock SELF-SPREADING Cotter Pin

Hammerlock Pattern

Manufacturers' Standard List Adopted October 5, 1922.

Packed as follows:

All 1/16 and 3/32-inch	1,000
1/8x1/2 to 1/8x1 1/2-inch	1,000
1/8x1 3/4-inch and larger	500
3/32x3/4 and 3/32x1-inch	1,000
3/32x1 1/4-inch and larger	500
1/16x3/4 and 1/16x1-inch	1,000
1/16x1 1/4 to 1/16x2 1/2-inch	500
1/16x3-inch and larger	250
1/4x1 and 1/4x1 1/4-inch	500
1/4x1 1/2-inch and larger	250
5/16x1 to 5/16x2 1/2-inch	250
5/16x3-inch and larger	Bulk
All 3/8-inch	Bulk

List Per Thousand
Diameter, Inches

Length, inches.	1/16 to 3/32	1/8	3/32	1/16	1/4	5/16	3/8
1/2	.33	.45					
3/4	.43	.58	.93	1.25			
1	.53	.70	1.10	1.55	2.80	4.20	
1 1/4	.63	.83	1.28	1.85	3.20	4.80	
1 1/2	.73	.95	1.45	2.15	3.60	5.40	7.80
1 3/4	.83	1.08	1.63	2.45	4.00	6.00	
2	.93	1.20	1.80	2.75	4.40	6.60	9.30
2 1/4			2.00	3.05	4.80	7.10	
2 1/2	1.23	1.55	2.20	3.35	5.20	7.60	10.80
3	1.53	1.90	2.60	3.95	5.90	8.60	12.30
3 1/2				4.55	6.60	9.60	13.30
4			3.80	5.15	7.30	10.60	15.30
5					8.70	12.60	18.30
6					10.10	14.60	21.30

Assortments Spring Cotters

Contains a total of 500 Cotters of the most popular sizes.

This Assortment consists of the following sizes:

60 each 1/16x 3/4, 1
60 each 3/32x 3/4, 1 1/4
60 each 1/8x1, 1 1/2
60 each 1/8x1 1/4
40 each 1/8x1 1/2
40 each 1/4x2

No. 500 Assortment...Each, $2.80
Weight per assortment 4 1/2 lbs.

No. 15—100 Assorted Spring Cotters, 1/8x1 and smaller. . . . . Each, $0.24

No. 14—100 Assorted Spring Cotters, 1/8x1 1/2 and and smaller. . . . Each, $0.28

No. E—100 Assorted Spring Cotters, 1/16x1/2 to 3/32x1. . . . . Each, $0.18

Assortment Spring Cotters

Contains 10 each of the following sizes of Hammerlock Spring Cotters.

3/32x3/4 and 1.
1/8x1 and 1 1/4.
1/8x1 1/4 and 1 1/2.
1/4x1 3/4 and 2.
1/8x2 and 2 1/2.

No. 1 Assortment..Each, $0.80
Weight per assortment, 1/2 lb.

Auto Kit Assortment Spring Cotters

Contains 100 Hammerlock Spring Cotters of common sizes put up in brass screw-top box nickel plated. Packed 25 Assortments in an attractive counter display carton. Consists of following sizes:

Size	Quantity	Size	Quantity
1/16x1/2	17	3/32x1 1/2	5
1/16x1	14	1/8x1/2	8
1/16x1 1/4	9	1/8x1	12
3/32x1	29	1/8x1 1/2	6

No. 648 Assortment.....Each, $0.30
Weight per assortment 7/8 lb.

Auto Dealers' Assortment Spring Cotters

Contains 1,000 Hammerlock Spring Cotters, popular sizes for general use. Consists of following sizes:

Size	Quantity	Size	Quantity	Size	Quantity
1/16x1/2	100	3/32x3/4	100	1/8x1 1/2	20
1/16x3/4	100	3/32x1	100	1/8x2	20
1/16x1	100	3/32x1 1/2	100	3/32x1 1/2	20
1/16x1 1/2	100	1/8x3/4	100	5/32x1 3/4	20
3/32x1/2	60	1/8x1	100		

No. 272 Assortment.....Each, $1.10
Weight per assortment 3 1/2 lbs.

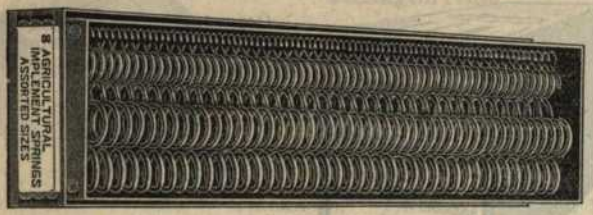
Motor Assortment Spring Cotters

Contains 100 Hammerlock Spring Cotters, sizes most commonly used. Consists of following sizes:

Size	Quantity	Size	Quantity
1/16x1/2	17	3/32x1 1/2	5
1/16x1	14	1/8x1/2	8
1/16x1 1/4	9	1/8x1	12
3/32x1	29	1/8x1 1/2	6

No. 389 Assortment.....Each, $0.20
Weight per assortment 1 lb.

Assortment Compression Springs



Easily cut to any required length.
Eight Springs to a box.

The cut illustrates our method of packing. These springs are extensively used on all farm machinery. Each box contains one each of the following sizes, 12 inches long:

No. of spring	1	2	3	4	5	6	7	8
Wire gauge	21	18	17	16	15	14	13	12
Outside diam., in.	1/16	3/16	7/16	1/2	5/8	3/4	25/32	31/32
Inside diam., in.	1/4	1/8	11/32	3/8	7/16	19/32	13/32	5/8

Above sizes carried in open stock.

No. 36 Assortment.....Each, $1.10

In broken lots, any size.....Per doz., $2.40

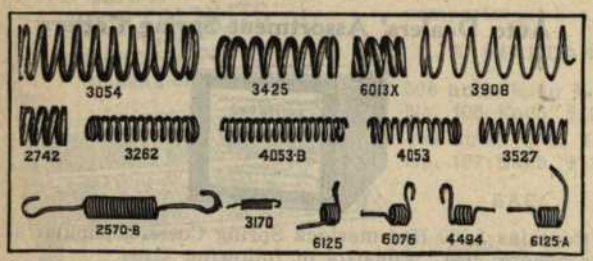
Assortment Compression Springs

Similar to No. 36, except it has twelve springs to a box.

This is a very handy assortment of just the right sizes for agricultural work. Each box contains two each Nos. 1, 2, 3 and 4 and four No. 5 Compression Springs, as listed above.

No. 135 Assortment.....Each, $1.40

Ford Spring Assortment



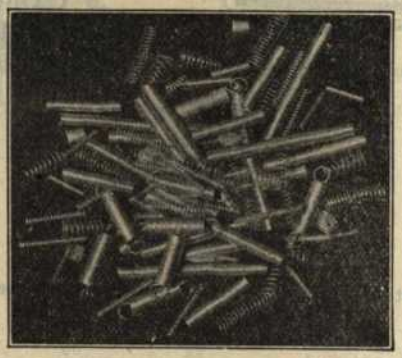
Fifteen sizes and kinds. A complete assortment of all springs used on a Ford car. A total of 36 springs, as follows:

Quan.	Mfgs. No.	Gauge and kind of wire. W. & M. Gauge No.	Wire	Diam., ins.	Length, ins.	Name or kind For
4	2570B	16	Steel	3/8	3 3/8	Brake Shoe
2	2742	11	Steel	11/32	25/32	Radius R. B. Cap
8	3054	12	Steel	11/32	3	Valve
1	3170	26	Piano	1/32	3/4	Com. Roller Arm
1	3262	16	Phos. Br.	1/8	1 1/8	Magneto Contact
3	3425	12	Steel	3/32	2	Trans. Band.
2	3527	17	Steel	7/64	1 7/8	Lead & T. Rod.
1	3908	17	Steel	3/32	2 5/8	Starting Crank.
4	4053	17	Steel	7/64	1 1/2	Hood Clip.
4	4053B	16	Steel	1/32	2 1/16	Hood Clip.
1	4494	17	Phos. Br.	3/64	1/16	Carb. Mix. T.Lev.
2	6013X	9	Steel	5/64	3/8	W. Shield Hinge.
1	6076	17	Steel	3/64	3/4	C. Aux. T. Lev.
1	6125	19	Piano	5/64	1/16	C. Cst. Air. Sup.
1	6125A	18	Steel	3/64	7/8	C. Cst. Air Sup.

We will not break boxes.

No. 40 Assortment.....Each, $2.20

Assortment Springs



Contains 100 very fine, brass and music wire springs, in 10 assorted sizes as follows, packed in box. Very handy for Repair Shops or Auto Electric Stations.

Spring No.	Kind	Dia.	Length	Wire
1	Comp.	5/16	1/16	.012 Brass
2	Comp.	1/4	3/32	.012 Music
3	Comp.	7/64	29/32	.018 Music
4	Comp.	3/64	1/16	.018 Music
5	Comp.	5/64	17/32	.012 Music
6	Comp.	3/64	3/16	.011 Music
7	Tap. Comp	3/32 x 3/32	1/2	.013 Music
8	Ext.	3/16	2	.016 Music
9	Ext.	1/16	1	.014 Music
10	Ext.	1/64	11/16	.020 Music

No. EC100 Assortment.....Each, $3.00

Extension Springs in Open Stock

We carry in open stock the following staple sizes of extension springs:

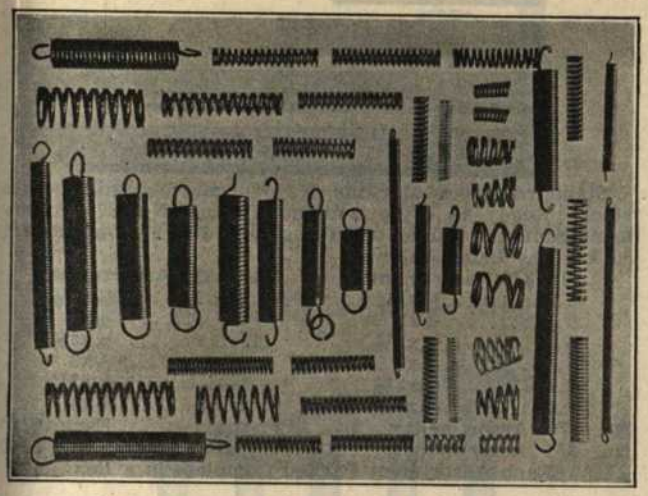
No.	Outside Dia. Inches	Length Inches	No. Wire	Doz.
E1	1/16	1	22	$1.00
E2	1/16	1 1/2	22	$1.00
E3	1/16	2	22	$1.00
E4	1/16	3	22	$1.00
E5	1/16	5	22	$1.00
E6	1/64	1	21	$1.00
E7	1/64	1 1/2	21	$1.00
E8	1/64	2	21	$1.00
E9	1/64	3	21	$1.00
E10	1/64	5	21	$1.00
E11	1/64	6	21	$1.00
E12	1/16	1 1/2	20	$1.20
E13	1/16	2	20	$1.20
E14	1/16	3	20	$1.20
E15	1/16	5	20	$1.20
E16	1/16	6	20	$1.20
E17	3/8	2	19	$1.50
E18	3/8	3	19	$1.50
E19	3/8	5	19	$1.50
E20	3/8	6	19	$1.50

Assortment Extension Springs

This Assortment consists of two each of thirty different sizes of Extension Springs ranging from 1/16"x1" to 1/2"x 5 1/16". Each Assortment labeled and put up in card board box. We will not break boxes.

No. 130 Assortment.....Each, $3.30

Assortment Springs



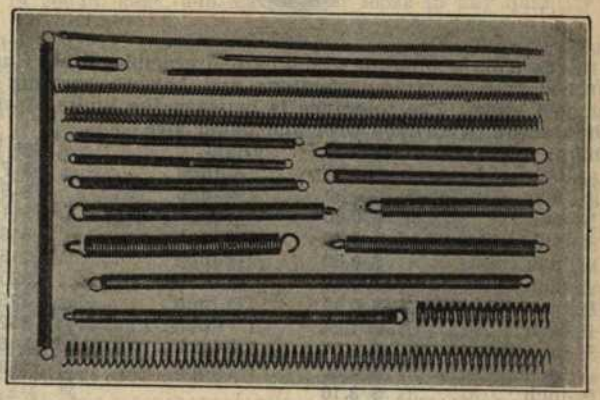
This assortment contains the following, 48 springs in all.

Quan.	Kind	Size Wire	Size Springs
2	Ext.	19 steel	3/8 x 3 1/4
2	Ext.	20 steel	11/32 x 6 1/8
2	Ext.	12 steel	3/8 x 4
1	Ext.	16 steel	11/64 x 4 1/16
2	Ext.	14 steel	5/16 x 5 1/2
2	Comp.	19 brass	3/8 x 25/32
2	Comp.	15 Ph. B.	1/2 x 3 1/2
2	Comp.	.022 music	5/16 x 1 31/32
2	Comp.	18 steel	3/8 x 2 3/32
2	Comp.	16 steel	3/8 x 2 1/8
2	Comp.	17 steel	7/16 x 2
2	Comp.	18 steel	1/2 x 2 1/16
2	Comp.	19 steel	7/16 x 2 1/8
2	Comp.	18 steel	7/16 x 2 5/8
2	Comp.	17 steel	15/32 x 2 1/2
1	Comp.	14 steel	5/8 x 2 27/32
2	Comp.	16 steel	1/2 x 2 1/2
1	Ext.	14 steel	11/32 x 4 7/8
1	Ext.	14 steel	11/32 x 3 5/8
1	Comp.	14 steel	1/8 x 2 3/32
2	Ext.	14 steel	5/8 x 4 5/32
1	Ext.	16 steel	23/64 x 3 7/16
1	Ext.	14 steel	11/32 x 2 31/32
1	Comp.	13 steel	7/8 x 3 1/16
1	Comp.	11 steel	1 1/16 x 2 5/8
2	Comp.	14 brass	27/32 x 1 5/8
2	Tap. Comp.	14 brass	5/8 x 3/4 x 1
2	Tap. Comp.	17 Ph. B.	31/32 x 1 1/8 x 1 1/8
1	Ext.	15 steel	17/32 x 2 3/4

We will not break boxes.

No. 148 Assortment ..... Each, $3.40

Assortment Automobile Springs



This assortment consists of twenty sizes oil tempered springs. The very best selling sizes of both compression and extension springs. This assortment is especially intended for the motor car owner. Springs must frequently be replaced and every car owner should have one of these assortments.

Quan.	Kind	Size Wire	Size Springs
1	Comp.	17 steel	5/8 x 11 1/2
1	Comp.	18 steel	3/8 x 11 1/2
1	Comp.	19 steel	1/4 x 11 1/2
1	Comp.	20 steel	7/16 x 11 1/2
1	Ext.	17 steel	23/64 x 10 9/16
1	Ext.	18 steel	11/32 x 8 1/8
1	Ext.	23 steel	5/32 x 7 5/16
1	Ext.	18 steel	7/16 x 6 7/16
1	Ext.	20 steel	23/64 x 6 1/2
1	Ext.	16 steel	7/16 x 5 1/4
1	Ext.	14 steel	23/64 x 5 5/8
1	Ext.	16 steel	23/64 x 4 1/2
1	Ext.	17 steel	3/8 x 5 1/2
1	Ext.	22 steel	11/64 x 9 1/16
1	Comp.	14 steel	5/8 x 3 1/8
1	Ext.	18 steel	11/32 x 5 3/8
1	Ext.	18 steel	11/32 x 5 3/4
1	Ext.	19 steel	1/4 x 5 11/32
1	Ext.	22 steel	1/4 x 6 1/16
1	Ext.	18 steel	11/32 x 1 7/16

We will not break boxes.

No. 34 Assortment ..... Each, $2.00

Assortments Whitney Keys

Contains one complete set for Ford cars, consisting of 12 assorted sizes in a box.

No. 437 Assortment ..... Per box, $0.80

One of the most essential equipments for garages. 100 assorted sizes in box.

No. 438 Assortment ..... Per box, $3.00

Steel Balls

Made from a superior grade carbon crucible steel. Guaranteed free from imperfections and boxed according to gauged sizes. The tolerance is between the limits of one thousandth of an inch over and under size.

Diam.	Per 100	Diam.	Per 100
1/16-inch	$ 1.00	5/16-inch	$ 7.40
3/32-inch	$ 0.80	5/8-inch	$ 9.70
1/8-inch	$ 0.60	11/16-inch	$11.00
5/32-inch	$ 0.70	3/4-inch	$13.80
7/64-inch	$ 0.80	13/16-inch	$16.00
9/64 inch	$ 0.90	7/8-inch	$20.00
1/4-inch	$ 0.94	15/16-inch	$25.00
5/16-inch	$ 1.24	1 -inch	$32.00
3/8-inch	$ 1.54	1 1/8-inch	$46.60
7/16-inch	$ 2.80	1 1/4-inch	$63.00
1/2-inch	$ 3.10		

1/16 to 3/8, 1,000; 7/16 to 3/4, 500; 13/16 to 1 1/4, 100 in a box. Will break boxes.

Round Can Assortment Steel Balls

Contains 100 Steel Balls of assorted sizes, 1/16 to 3/4 inch. Weight per assortment 1 1/2 lbs.

No. 13 Assortment.....Each, $2.50

Assortment Steel Balls

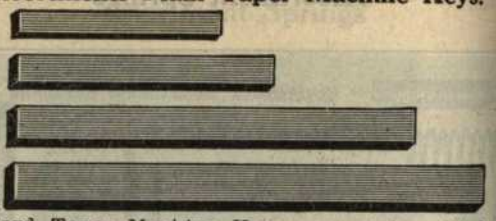
An assortment of high grade crucible steel balls, entirely free from surface or internal defects; rust protecting oil coating on balls. Each assortment contains sizes and quantity to meet practically every repair job; each size in moisture proof, wax lined carton. Weight per assortment 3 1/2 lbs.

Contains 376 Balls as follows:

50—3/16-in.	60—1/2-in.
50—1/4-in.	20—9/16-in.
50—5/16-in.	15—5/8-in.
100—3/8-in.	11—3/4-in.
20—7/16-in.	

No. 569 Assortment.....Each, $10.00

Assortments Plain Taper Machine Keys.



Standard Taper Machine Keys accurately milled from steel. Ready to drive without fitting. No. 370 Assortment contains a total of 25 keys and No. 371 Assortment 50 keys as listed below:

No. 370 Assortment		No. 371 Assortment	
3	1/8x1 1/2	6	1/8x1 1/2
5	3/16x2	10	3/16x2
6	1/4x2 1/2	12	1/4x2 1/2
8	5/16x3	15	5/16x3
2	3/8x3 1/2	5	3/8x3 1/2
1	1/2x4	2	1/2x4

No. 370 Assortment.....Each, $2.00
No. 371 Assortment.....Each, $4.00
Each Assortment Packed Complete in a Box.

Open Stock Plain Taper Machine Keys

These Keys are the same as contained in the above assortments.

No. 91—1/8x1 1/2.....Each, $0.12
No. 92—3/16x2.....Each, $0.14
No. 93—1/4x2 1/2.....Each, $0.16
No. 94—5/16x3.....Each, $0.18
No. 95—3/8x3 1/2.....Each, $0.20
No. 96—1/2x4.....Each, $0.28

Round Can Assortment Taper Pins

No. 10 contains 100 assorted round Taper Pins 1/16x3-inch and smaller. Weight per assortment 1 7/8 lbs.

No. 10.....Each, $1.80

No. 11 contains 50 assorted round Taper Pins 1/4x1 1/2-inch and smaller. Weight per assortment 7/8 lb.

No. 11.....Each, $1.20

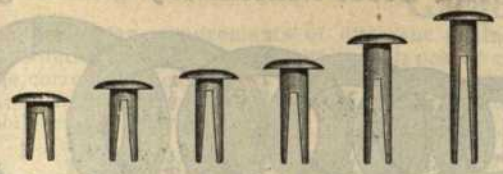
Standard Steel Taper Pins

Taper 1/4 inch to foot. In giving sizes other than those included in list, measure at largest point.

Manufacturers' Standard List.
List per 100.

Diam. at large end, in.	.156	.172	.193	.219	.250	.289	.341	.409
Approx. fraction sizes	5/32	11/64	3/16	7/32	1/4	9/32	11/32	13/32
No.	0	1	2	3	4	5	6	7
Lgth., in.								
3/4	1.80	2.00	2.10	2,30	2.50	2.75	3.00	....
1	2.05	2.25	2.35	2.55	2.75	3.00	3.25	3.65
1 1/4	2.30	2.50	2.60	2.80	3.00	3.25	3.50	4.00
1 1/2	2.55	2.75	2.85	3.05	3.25	3.50	3.75	4.25
1 3/4	2.80	3.00	3.10	3.30	3.50	3.75	4.00	4.50
2	3.05	3.25	3.35	3.55	3.75	4.05	4.35	4.75
2 1/4	3.30	3.50	3.60	3.80	4.00	4.40	4.75	5.25
2 1/2	3.55	3.75	3.85	4.05	4.25	4.75	5.20	5.75
2 3/4	....	4.00	4.10	4.30	4.50	5.10	5.70	6.25
3	....	....	4.35	4.55	4.75	5.45	6.25	6.75
3 1/4	....	....	....	....	....	....	6.75	7.25
3 1/2	....	....	....	....	....	....	7.25	7.75
3 3/4	....	....	....	....	....	....	7.75	8.25
4	....	....	....	....	....	....	8.25	8.75

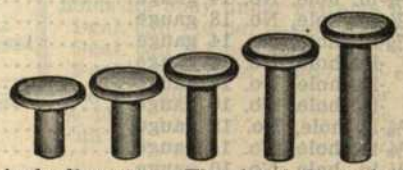
No. 964 Pure Brass Split Rivets



Body 3/4 inch diameter. Oval head 5/8 inch diameter.
Packed 100 rivets in a box, 12 boxes in a carton.

	5/16	6/16	7/16	8/16	10/16	12/16
Carton 1,200 Rivets.	$3.00	$3.40	$3.70	$4.00	$4.50	$5.00

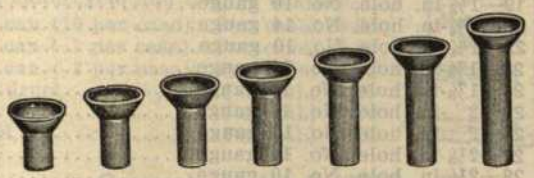
No. 40 Pure Brass Tubular Rivet



Body 3/4 inch diameter. Flat head 3/8 inch diameter.
Packed 100 rivets in box, 12 boxes in a carton.

	4/16	5/16	6/16	8/16	10/16
Carton 1,200 Rivets.....	$6.50	$7.00	$7.50	$8.00	$9.00

No. 50 Pure Brass Tubular Rivets



Countersunk, Hollow Center Heads
Body 3/4 inch diameter. Head 5/8 inch diameter.
Packed 100 rivets in a box, 12 boxes in a carton.

	4/16	5/16	6/16	7/16	8/16	10/16
Carton 1,200 Rivets.	$7.00	$7.70	$8.40	$8.90	$9.20	$10.50

Solid Copper Brake Band Rivets

Countersunk Head

Size No.	Length, ins.	Per lb.	Size No.	Length, ins.	Per lb.
10	3/8	$0.90	8	3/8	$0.84
10	1/2	$0.90	8	1/2	$0.84
10	5/8	$0.90	8	5/8	$0.84
10	3/4	$0.90	8	3/4	$0.84
9	3/8	$0.88	7	1/2	$0.80
9	1/2	$0.88	7	5/8	$0.80
9	5/8	$0.88	7	3/4	$0.80
9	3/4	$0.88			

Packed 1 lb. in box.

Countersunk Head Iron Rivets

Size, ins.		List Keg Lots	List 5-lb. Lots
3/8x1/2-5/8	Per lb.,	.16	.21
7/16x3/4-7/8	Per lb.,	.15½	.20½
3/8x1-1¼-1½	Per lb.,	.15	.20

Round Head Iron Rivets

In 200-lb. kegs, 5-lb. cartons, or loose in any quantity.

Size, ins.		List Keg Lots	List 5-lb. Lots
1/8x3/8	Per lb.,	.29	.34
1/8x1/2, 5/8	Per lb.,	.22	.27
1/8x3/4, 7/8	Per lb.,	.21½	.26½
1/8x1	Per lb.,	.21	.26
5/32x3/8	Per lb.,	.21	.26
5/32x1/2, 5/8	Per lb.,	.18	.23
5/32x3/4	Per lb.,	.17½	.22½
5/32x1, 1¼, 1½, 1¾, 2	Per lb.,	.17	.22
5/32x2¼, 2½, 2¾, 3	Per lb.,	.20	.25
1/4x3/8	Per lb.,	.19	.24
1/4x1/2, 5/8	Per lb.,	.17	.22
1/4x3/4, 7/8	Per lb.,	.16½	.21½
1/4x1, 1¼, 1½, 1¾, 2	Per lb.,	.16	.21
1/4x2¼, 2½, 2¾, 3, 3½	Per lb.,	.18	.23
1/4x4, 4½	Per lb.,	.19	.24
5/16x1/2, 5/8	Per lb.,	.16½	.21½
5/16x3/4, 7/8	Per lb.,	.16	.21
5/16x1, 1¼, 1½, 1¾, 2	Per lb.,	.15½	.20½
5/16x2½, 3	Per lb.,	.17½	.22½
3/8x1/2, 5/8	Per lb.,	.16	.21
3/8x3/4, 7/8	Per lb.,	.15½	.20½
3/8x1, 1¼, 1½, 1¾, 2	Per lb.,	.15	.20
3/8x2½, 3	Per lb.,	.17	.22
7/16x1, 1½, 2, 2¼	Per lb.,	.15	.20
7/16x2½, 3	Per lb.,	.17	.22

Flat Head Iron Rivets

In 200-lb. kegs, 5-lb. cartons, or loose in any quantity.

Size, ins.		List Keg Lots	List 5-lb. Lots
5/16x1, 1¼, 1½, 1¾, 2	Per lb.,	.17	.22
5/16x2¼, 2½, 2¾, 3	Per lb.,	.20	.25
1/4x3/4	Per lb.,	.16½	.21½
1/4x1, 1¼, 1½, 1¾, 2	Per lb.,	.16	.21
1/4x2¼, 2½, 2¾, 3, 3¼, 3½	Per lb.,	.18	.23
1/4x4, 4½	Per lb.,	.19	.24

Countersunk Oval Head Drill Point Iron Rivets

In 1-lb. boxes.

Size, ins.		
5/16x3/4-7/8-1	Per lb.,	$0.24
3/8x3/4-7/8-1	Per lb.,	$0.24

5/16x7/8 is the most staple size.

California Tire Rivets and Burrs

Furnished with burrs unless otherwise ordered. In 5-lb. boxes.

Rivets with Burrs.

Size, ins.		
1/4x1¾, 2, 2¼, 2½	Per lb.,	$0.54
5/16x2, 2½, 3, 3½	Per lb.,	$0.54

Extra Burrs for California Tire Rivets.

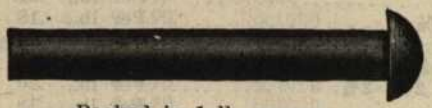
1/4-inch	Per lb.,	$0.54
5/16-inch	Per lb.,	$0.54

Canvas Rivets With Burrs

A soft iron rivet, with large flat head. Tinned finish. Packed in 1-lb. papers.

No. 9—¾, ⅞, 1 inch long.....per lb., $0.40

Round Head Pitman Strap Rivets



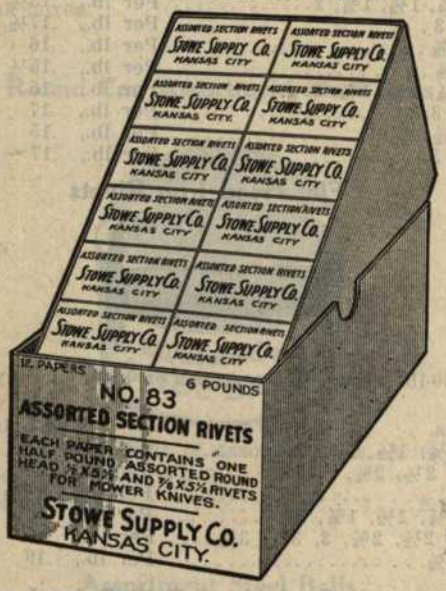
Packed in 1 lb. papers.

Size, ins.

¼x1½-1¾-2-2¼-2½.....Per lb., $0.24

For Copper Rivets and Burrs, see Index.

No. 83 Assortment Rivets



This assortment consists of 12 papers. Each paper weighs one-half pound and contains enough rivets for one mower knife, for both the section and head. The rivets are ½x5½ and ⅞x5½ Bung Head and can be used on almost any mower knife.

No. 83 Assortment.....Each, $2.00

A Few Principal Uses for Machinery Bushings

All mowers take 1½ main axle, 1¼ crank shaft, 1¼ on countershaft, ⅞ and 1-inch on wrist pin on pitman.

All binders take 1½ on main axle, ⅝ on knotter pins, and in various other places use ¾ to 1½ inch.

All corn binders take 1¾ on main axle, and in various other places take ¾ to 1¾-inch.

All sulky and gang plows and listers, 1¼ on axles.

All hay rakes, 1⅜ on axles.

Superior wheat drills, 1⅜ on axles.

Success wheat drills, 1⅜ on axles and ⅞ on spring rods.

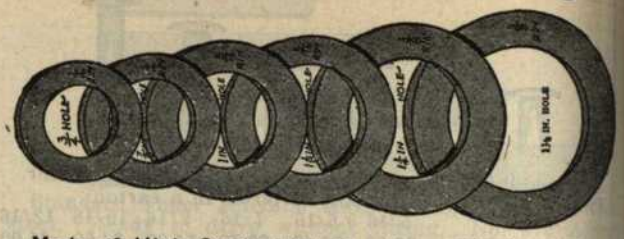
Indiana wheat drills, 1¼ on axles.

Old Hoosier wheat drills, 1¼ on axles and 1¼ on hubs in discs.

Late Hoosier wheat drills, 1⅜ on axles and taper hubs in discs.

They can also be used on all kinds of farm machinery, threshing machines and windmills.

Mild Steel Machinery Bushings



Made of High Grade Mild Machinery Steel. A Good Material to Resist Friction.

		Per 100
No. 1—	⅝-in. hole, No. 18 gauge	1.00
No. 2—	¾-in. hole, No. 18 gauge	1.50
No. 3—	¾-in. hole, No. 14 gauge	2.00
No. 4—	⅞-in. hole, No. 18 gauge	2.00
No. 5—	⅞-in. hole, No. 14 gauge	2.50
No. 6—	1 -in. hole, No. 18 gauge	2.50
No. 7—	1 -in. hole, No. 14 gauge	3.00
No. 8—	1 -in. hole, No. 10 gauge	3.50
No. 9—	1⅛-in hole, No. 18 gauge	3.00
No. 10—	1⅛-in. hole, No. 14 gauge	4.00
No. 11—	1⅛-in. hole, No. 10 gauge	5.00
No. 12—	1¼-in. hole, No. 18 gauge	4.00
No. 13—	1¼-in. hole, No. 14 gauge	5.00
No. 14—	1¼-in. hole, No. 10 gauge	6.00
No. 15—	1⅜-in. hole, No. 18 gauge	6.00
No. 16—	1⅜-in. hole, No. 14 gauge	7.00
No. 17—	1⅜-in. hole, No. 10 gauge	8.00
No. 18—	1½-in. hole, No. 14 gauge	7.00
No. 19—	1½-in. hole, No. 10 gauge	9.00
No. 20—	1¾-in. hole, No. 14 gauge	8.00
No. 22—	1¾-in. hole, No. 10 gauge	10.00
No. 23—	1⅞-in. hole, No. 14 gauge	10.00
No. 24—	1⅞-in. hole, No. 10 gauge	14.00
No. 25—	2 -in. hole, No. 14 gauge	12.00
No. 26—	2 -in. hole, No. 10 gauge	16.00
No. 27—	2⅛-in. hole, No. 14 gauge	14.00
No. 28—	2⅛-in. hole, No. 10 gauge	18.00

Nos. 1 to 5 have ¼-inch rim; Nos. 6 to 11 have ⅜-inch rim; Nos. 12 to 22 have ⅜-inch rim.

Sizes Nos. 1 to 7, inclusive, and 9, 12 and 15 packed 100 in pasteboard box. All other numbers up to and including No. 22, 25 in a box; Nos. 23 to 28 in bulk.

Machinery Bushing Assortments

These assortments consist of various quantities of Machinery Bushings as listed above and put up in assortments for the convenience of our dealers. Each assortment packed in cardboard box.

No. 21 Assortment.

Contains 1 each of Nos. 1 to 22, making a total of 21 Machinery Bushings in all.

No. 21 Assortment.....Each, $0.80

No. 56 Assortment.

Contains 2 each of Nos. 1 to 22 and 17 extra bushings of ⅝ to 1¾ inches, making a total of 56 Machinery Bushings in all.

No. 56 Assortment.....Each, $1.50

No. 100M Assortment.

This assortment contains 100 machinery Bushings in various amounts of the Nos. listed below:

Quantity	No.	Hole, Ins.	No. Gauge	Quantity	No.	Hole, Ins.	No. Gauge
3	1	⅝	18	5	12	1¼	18
3	2	¾	18	10	13	1¼	14
3	3	¾	14	5	14	1¼	10
3	4	⅞	18	5	15	1⅜	18
5	5	⅞	14	5	16	1⅜	14
5	6	1	18	3	17	1⅜	10
10	7	1	14	3	18	1½	14
3	8	1	10	3	19	1½	10
3	9	1⅛	18	5	20	1¾	14
10	10	1⅛	14	3	22	1¾	10
5	11	1⅛	10				

No. 100M Assortment.....Each, $4.00

Gargoyle Mobiloil

The lubrication requirements of different engines differ widely. No one oil will correctly lubricate all engines. Different types of engines require different grades of oil. The correct lubricant for a given engine should be an oil of the highest lubricating efficiency. Some one of the grades of Gargoyle Mobiloil will correctly lubricate any automobile engine now in service.

GARGOYLE

Mobiloil

Make the chart your guide

For Cylinder Lubrication

Gargoyle Mobiloil "A"

Medium Body

A dark amber-colored oil for lubrication of water-cooled engines requiring a rich lubricant. Also for the motor and enclosed chains of electric vehicles for motorcycles where a medium-bodied oil is required and for motor-boat engines. It holds its body under extreme heat.

1-gal. can (10 per case)	Per case,	13.00
5-gal. can (1 per case)	Per case,	5.85
5-gal. can (2 per case)	Per case,	11.35
15 gal. drum	Per gal.,	1.10
½ bbl.	Per gal.,	1.05
Full bbl.	Per gal.,	1.00

Gargoyle Mobiloil "B"

Heavy Body

For both air and water-cooled engines where a heavy bodied oil is required. It holds up compression under extreme heat. This oil is especially suitable for lubrication of motorcycle and tractor engines.

1-gal. can (10 per case)	Per case,	14.50
5-gal. can (1 per case)	Per case,	6.60
5-gal. can (2 per case)	Per case,	12.85
15-gal. drum	Per gal.,	1.25
½ bbl.	Per gal.,	1.20
Full bbl.	Per gal.,	1.15

Gargoyle Mobiloil "BB"

Medium Heavy Body.

A dark ruby oil especially suitable for lubrication of Fordson tractors and other tractor engines. It maintains compression and power under extreme heat.

1-gal. can (10 per case)	Per case,	14.50
5-gal. can (1 per case)	Per case,	6.60
5-gal. can (2 per case)	Per case,	12.85
15-gal. drum	Per gal.,	1.25
½ bbl.	Per gal.,	1.20
Full bbl.	Per gal.,	1.15

Gargoyle Mobiloil "E"

Light Body

A straw-colored oil for lubrication of vertical gasoline engines where an oil of light body is required. It flows freely in cool weather. Particularly suited to Fords.

1-gal. can (10 per case)	Per case,	13.00
5-gal. can (1 per case)	Per case,	5.85
5-gal. can (2 per case)	Per case,	11.35
15-gal. drum	Per gal.,	1.10
½ bbl.	Per gal.,	1.05
Full bbl.	Per gal.,	1.00

Gargoyle Mobiloil "Arctic"

Light Medium Body

A light-colored oil of intermediate body for both summer and winter lubrication of gasoline engines. It flows freely in cold weather.

1-gal. can (10 per case)	Per case,	13.00
5-gal. can (1 per case)	Per case,	5.85
5-gal. can (2 per case)	Per case,	11.35
15-gal. drum	Per gal.,	1.10
½ bbl.	Per gal.,	1.05
Full bbl.	Per gal.,	1.00

For Transmission and Differential Lubrication

Gargoyle Mobiloil "C"

A heavy dark fluid oil for transmission and differential lubrication, especially for ball or roller-bearing types, as well as for timing gears and worm gears. It will follow, coat, cushion, and thoroughly lubricate the gears, preventing unnecessary wear.

1-gal. can (10 per case)	Per case,	11.50
5-gal. can (1 per case)	Per case,	5.10
5-gal. can (2 per case)	Per case,	9.85
15-gal. drum	Per gal.,	.95
½ bbl.	Per gal.,	.90
Full bbl.	Per gal.,	.85

Gargoyle Mobiloil "CC"

A heavy lubricant of dark amber color, semi-fluid at operative temperatures. It will follow, coat, cushion, and thoroughly lubricate the gears, preventing unnecessary wear and allowing them to engage easily and operate without noise. Its use is recommended where, with a fluid oil, leakage would occur from transmission case or rear axle housing.

5-lb. can (10 per case)	Per case,	12.75
10-lb. can (6 per case)	Per case,	13.20
25-lb. can (1 per case)	Per case,	5.30
25-lb. can (2 per case)	Per case,	10.40
½ bbl.	Per lb.,	.16½
Full bbl.	Per lb.,	.15½

Mobilubricant Grease

For packing wheels, steering gear housing, transmission, differential, universal joints and grease cups of automobiles; for packing stuffing-boxes of motor boats; for lubricating farm machinery and for coating the bright parts of machinery and automobiles to prevent rust.

1-lb. tins (24 per case)	Per case,	5.65
1-lb. tins (48 per case)	Per case,	10.25
5-lb. tins (12 per case)	Per case,	11.80
25-lb. tins (1 per case)	Per case,	4.90
50-lb. tins (1 per case)	Per case,	8.75
½ bbl. (average 225 lbs. net)	Per lb.,	.145
1 bbl. (average 375 lbs. net)	Per lb.,	.135

For the Home Garage

A sealed 15-gallon steel drum with faucet, filled with the correct grade of Gargoyle Mobiloil, is a real convenience in the home garage. The air-tight, weatherproof construction of the drum keeps the oil clean and free from impurities and avoids all waste. The steel drum enables the purchaser to secure a supply of Gargoyle Mobiloils at a lower price per gallon. Other sizes 30 and 55 gallons.

Prices shown on Mobiloils include the containers, except on the 15-gal. or ½-bbl. containers, for which there is a slight extra charge.

Nourse Motor Oil

"The Oil With the Ball Bearing Base"
(Copyrighted.)

In all weights—Specify grade desired.

Nourse Motor Oil is made from Paraffine Base Crude and Pure Vegetable Castor scientifically blended by Jack Nourse's Electrical Process which is patented and guarantees greater mileage, greater lubricating qualities and less carbon than any other automobile oil on the market.

Furnished in light, medium and heavy grades.

Light Nourse Motor Oil

A light colored oil for cylinder lubrication of all autos where an oil of light body is required.

Cases of 6 1-gallon cans.....Per case, $ 9.60
Cases of 12 ½-gallon cans.....Per case, $11.40
In 5-gallon cans.....Per gal., $ 1.34
In steel bbls., ½ bbls., or ¼ bbls., containers extra.....Per gal., $ 1.10

Medium Nourse Motor Oil

An amber colored oil which holds its body under extreme heat. Recommended for all new cars during their first fifteen thousand miles. The low gravity gasolines now on the market make greater heat and it is advisable to have a good bodied oil with a high fire test.

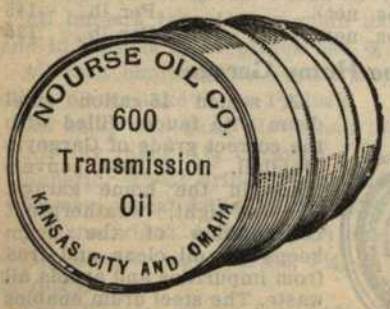
Cases of 6 1-gallon cans:.....Per case, $10.20
Cases of 12 ½-gallon cans.....Per case, $12.00
In 5-gallon cans.....Per gal., $ 1.44
In steel bbls., ½ bbls. or ¼ bbls., containers extra.....Per gal., $ 1.20

Heavy Nourse Motor Oil

An oil of wonderful wearing qualities and heavy body for cars having run a big mileage and also for use on trucks where the heavy load and constant service under adverse conditions require a heavy bodied oil.

Cases 6 1-gallon cans.....Per case, $10.80
Cases 12 ½-gallon cans.....Per case, $12.60
In 5-gallon cans.....Per gal., $ 1.54
In steel bbls., ½ bbls. or ¼ bbls., containers extra.....Per gal., $ 1.30

600 Transmission Oil



An oil of six hundred fire test of very heavy body. Suitable for both Transmission and Differentials. Can be handled with a grease gun. When the manufacturer of the car suggests using oil in transmission and differential this is the ideal Heavy bodied oil for the purpose.

In 5-gallon cans.....Per gallon, $1.20
In steel barrels or ½ barrels, containers extra.....Per gallon, $0.96

New Ford Motor Oil

A Ford Motor Oil which is fool-proof and trouble-proof. Stops the jerking and chugging and prevents the grabbing of the bands so the clutch holds when it tightens. Contains highly filtered paraffin oils blended by the famous Nourse process and with chemically pure glycerine added, making a perfect mixture which does not settle out or separate under any condition.

Furnished in either medium for motors in good condition or heavy for old or badly worn motors.

Medium

In steel bbls., Containers extra.....Per gal., $1.20
In single 5-gallon cans.....Per gal., $1.44
In lots of ten 5-gallon cans.....Per gal., $1.30

Heavy

In steel bbls., Containers extra.....,Per gal., $1.30
In single 5-gallon cans.....Per gal., $1.54
In lots of ten 5-gallon cans.....Per gal., $1.40

Nourse Tractor Oil

"The Oil With the Ball Bearing Base"
(Copyrighted.)

Nourse Tractor Oil is made from Paraffine Base Crude and Pure Vegetable Castor scientifically blended by Jack Nourse's Electrical Process which is patented and guarantees greater lubricating qualities and less carbon than any other tractor oil on the market.

A Tractor Oil with a small carbon per cent, a high fire test and wonderful lubricating qualities. It adheres better to the side walls under intense heat than any other Tractor Oil on the market.

In three weights, Medium, Heavy and Extra Heavy.

The Medium is a suitable oil for all light tractors and the Fordson.

The Heavy is a heavier bodied oil which withstands extreme heat. It works perfectly for the majority of makes of Tractors under ordinary conditions.

The Extra Heavy is good for any Tractors which have seen long service, and where piston rings and side walls are worn it is a wonderful oil for keeping the compression and giving the lubrication.

Prices shown apply to all grades. **Orders must specify which is wanted.**

In 5 gallon cans.....Per gal., $1.34
In steel bbls., ½ bbls. or ¼ bbls., containers extra.....Per gal., $1.10

Extra for Containers

Returnable at Same Price

Steel quarter barrels.....$4.00
Steel half barrels.....$5.00
Steel barrels.....$7.00

Viking Lubricant

The Wonder Grease for Transmission and Differential

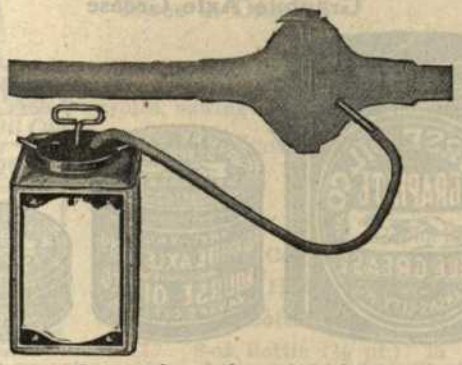
It takes 10 degrees below zero to freeze it.

It takes 300 degrees of Fahrenheit heat to melt it.

As easy to sell and deliver as gasoline.

In cases of 12 5-lb. cans.....Per case, $19.20
In cases of 6 10-lb. cans.....Per case, $18.00
In 25-lb. cans.....Per can, $ 7.00
In 50-lb. cans.....Per can, $13.00
In steel barrels containing 450 lbs., containers extra.
.....Per lb., $ 0.20

Olympic Grease Gun



Simply unscrew cap from the original 25 and 50-pound cans, in which the grease or transmission oil comes, screw on the gun and start pumping. Pumps ¼ pound on each stroke. When can is empty just change to a new full can of grease. The quickest, cleanest and most economical way of buying and delivering grease and transmission oil to the transmission and differential of automobiles and tractors. For the Garage, Service Station and man who takes care of his own car. Strongly made from cast iron, seamless steel tubing and four-foot long flexible metal hose.

On an order for a 25-pound or 50-pound can of Viking lubricant, an Olympic Grease Gun is furnished at cost.....$9.00

Automobile Cup Grease

On account of the greater heat and friction around an automobile, the ordinary hard oil or cup grease has not the necessary heat withstanding qualities. This is a very fine animal fat grease with a very high melting point, which is especially adapted to automobiles.

In cases of 24 1-pound cans.....Per case, $ 7.68
In cases of 48 1-pound cans.....Per case, $14.36
In cases of 12 3-pound cans.....Per case, $10.80
In cases of 24 3-pound cans.....Per case, $20.60
In cases of 6 10-pound cans.....Per case, $15.60
Single 25-pound cans in case.....Each, $ 6.00
Single 50-pound cans in case.....Each, $11.00
In steel bbls., ½ bbls. or ¼ bbls., containers extra.....Per lb., $ 0.16

Thresher Hard Oil or Velvet Cup Grease

A slow melting grease made from animal fat for cups on threshing machinery or shafting and for all hard oil bearings and journals on farm machinery or any other kind of machinery. It takes less of this grease because it melts slower and has better lubricating qualities.

In cases of 24 1-pound cans.....Per case, $ 6.20
In cases of 48 1-pound cans.....Per case, $12.00
In cases of 12 3-pound cans.....Per case, $ 7.50
In cases of 24 3-pound cans.....Per case, $14.60
In cases of 12 5-pound cans.....Per case, $13.00
In cases of 6 10-pound cans.....Per case, $12.40
Single 25-pound cans in case.....Each, $ 4.90
Single 50-pound cans in case.....Each, $ 9.00
In steel bbls., ½ bbls. or ¼ bbls., containers extra.....Per lb., $ 0.12

Graphonite Harvester Oil

This oil is a combination, consisting of engine oil, cylinder oil and a solution of graphite, all boiled together. Will outlast and outwear anything on the market.

One gallon goes as far as a gallon and a half of the best castor. Made for service and wear.

In cases of 12 1-gallon cans.....Per case, $14.40
In 5-gallon case.....Per gal., $ 0.94
In steel bbls., ½ bbls. or ¼ bbls., containers extra.....Per gal., $ 0.70

Velvet Harvester Oil

The same oil as Graphonite Harvester Oil except the Graphite has been left out of it. The oil has a good body, and is an excellent lubricant.

In 5-gallon cans.....Per gal., $0.84
In steel bbls., ½ bbls. or ¼ bbls., containers extra.....Per gal., $0.60

Black Oil

A good black lubricating oil. The best cheap lubricating oil on the market.

Steel barrels.....Per gal., $0.36

Extra for Containers

Returnable at same price.

Steel quarter barrels.....$4.00
Steel half barrels.....$5.00
Steel barrels.....$7.00

Velvet Castor Machine Oil

This is a heavy, ropy, stringy oil instead of a light, thin one. Velvet Castor Machine Oil retains its extra heavy body no matter how hot the day. In the farmer's oil can under the burning hot sun of a harvest field it has the heavy body that he wants. There is no castor sold by any company which can equal it for heavy body and wear. We will replace free of charge any oil which goes to pieces in the summer.

In cases of 12 1-gallon cans.....Per case, $14.40
In 5-gallon cans.....Per gal., $ 0.94
In steel bbls., ½ bbls. or ¼ bbls., containers extra.....Per gal., $0.70

Red Engine Oil

Suitable for shafting and oiling light machinery. This oil has a good cold test and makes an ideal oil for use on windmills and all machinery used outdoors in the winter time.

In 5-gallon cans.....Per gal., $0.84
In steel bbls., ½ bbls. or ¼ bbls., containers extra.....Per gal., $0.60

Frictionless Cylinder Oil

A dark green colored oil of 600 fire test. This oil is also compounded with animal fat and will work on threshing engines. A good cylinder oil in every way, but not quite so high a fire test, and the color is darker than our Velvet. Because the fire test is lower it is better adapted to wet steam conditions and low pressure.

In 5-gallon cans.....Per gal., $1.30
In steel bbls., ½ bbls. or ¼ bbls., containers extra.....Per gal., $ 1.06

Extra for Containers

Returnable at Same Price

Steel quarter barrels.....$4.00
Steel half barrels.....$5.00
Steel barrels.....$7.00

Velvet Cylinder Oil

A bright green colored oil of 700 fire test. This oil is heavily compounded with animal fat and will work on any threshing engine. It feeds a good drop and does not break and splatter the glass. The steam on the average threshing engines is very dry, and Velvet Cylinder, because of its high fire test, is particularly well adapted to them.

In 5-gallon cans.....Per gal., $1.50
In steel bbls, ½ bbls. or ¼ bbls., containers extra.....Per gal., $1.26

Graphite Axle Grease

The graphite in this grease forms a coating on the inside of the boxing and on the axle, so that when the grease wears dry the wheel will still be running smooth on the graphite coating formed. The graphite is mixed all through the grease and gets in the tiny scratches and places formed by wear and tear and smooths them up.

1-pound cans, 48 in a case.....Per case, $ 9.00
3-pound pails, 24 in a case.....Per case, $10.80
10-pound pails, 6 in a case.....Per case, $ 9.00
15-pound pails, shipped loose.....Per doz., $25.20
25-pound pails, shipped loose.....Per doz., $36.00
In steel bbls., ½ bbls. or ¼ bbls., containers extra.....Per lb., $ 0.09

White Cream Separator Oil

In order to have an oil that will not gum on any make of cream separator our factory adds a little pure sperm oil to this Separator Oil. This makes the oil especially good for lubricating the more delicate parts and the point of contact. The oil is white and a Pennsylvania product of exceptionally fine quality. Also adapted to sewing machines and lawn mowers.

In cases of 12 1-quart cans.....$ 6.38
In cases of 25 1-quart cans.....$11.76
In cases of 12 ½-gallon cans.....Per case, $ 9.36
In cases of 12 1-galoln cans.....Per case, $15.12
In 5-gallon cans.....Per gal., $ 1.00
In steel bbls., ½ bbls. or ¼ bbls., containers extra.....Per gal., $ 0.76

Dixon's Flake Graphite

It cools hot boxes as nothing else will. Indispensable where machinery is used. For chains, gears, etc., it has no equal. Carry it in stock. It will not spoil, and you should sell lots of it.

1-pound tin cans.....Each, $1.00
5-pound tin cans.....Each, $4.80
10-pound tin cans.....Each, $9.30

Three in One Oil

For use on guns, oiling magnetos, bicycles, sewing machines, typewriters and everything requiring a perfect non-gumming lubricant.

No.	Size Container	No. in Box	Per Doz.
M215	3½-oz. Handy Can	12	$4.80
M216	1-oz. Bottle	24	$2.40
M217	8-oz. Bottle (½ pt.)	12	$9.60

Kill Dust Sweeping Compound

Made of hardwood sawdust, pumice stone, ground gypsum, floor oil and disinfectant. This compound will not dry out, as the particles of hardwood sawdust pass through a series of rolls like those in a flour mill, and each particle of hardwood sawdust is pressed full of oil. Made with a heavy weight of floor oil, which does not evaporate.

In 100-lb. steel drums.....Per drum, $ 5.50
In 100-lb. wood drums.....Per drum, $ 5.00
In 250-lb. wood drums.....Per drum, $10.00

Neatslene Harness Oil

Furnished in either light without coloring or dark with coloring. A special coloring is used in the dark Neatslene. It contains no lamp black and will not rub off on the hands. It has fish oil in it, which keeps the rats and mice from gnawing the leather. It contains more Neatsfoot than any other harness oil on the market. Specially adapted for dipping. Orders should state when light color is wanted. Unless otherwise specified we ship dark color.

In cases of 12 1-quart cans.....Per case, $ 6.50
In cases of 24 1-quart cans.....Per case, $12.00
In cases of 12 ½-gallon cans.....Per case, $ 9.60
In cases of 12 1-gallon cans.....Per case, $15.60
In 5-gallon cans.....Per gal., $ 1.04
In steel bbls., ½ bbls. or ¼ bbls., containers extra.....Per gal., $ 0.80

Extra for Containers

Returnable at Same Price

Steel quarter barrels.....$4.00
Steel half barrels.....$5.00
Steel barrels.....$7.00

Harness Dipping Tanks

Made of 24 gauge galvanized steel, with a 10-inch flange. Tank 24 inches deep, 24 inches diameter. Basket 20 inches deep by 22 inches diameter.

Dipping Tank and Basket, complete, capacity 50 gallons.....$18.00
Tank only.....$13.00
Basket only.....$11.00

Gasoline and Kerosene Tanks

Faucet Tanks — Pump Tanks

Made of 26-gauge galvanized steel.

The Pump Tanks are equipped with special pump that will handle either light or heavy oil. Hood cover folds over pump when not in use. Made in three sizes. Painted red or green. Green shipped unless otherwise specified.

The Faucet Tanks have a 4-inch round screw top and ⅝-inch brass faucet.

Faucet Tanks are not painted except on special order and at a slight additional cost.

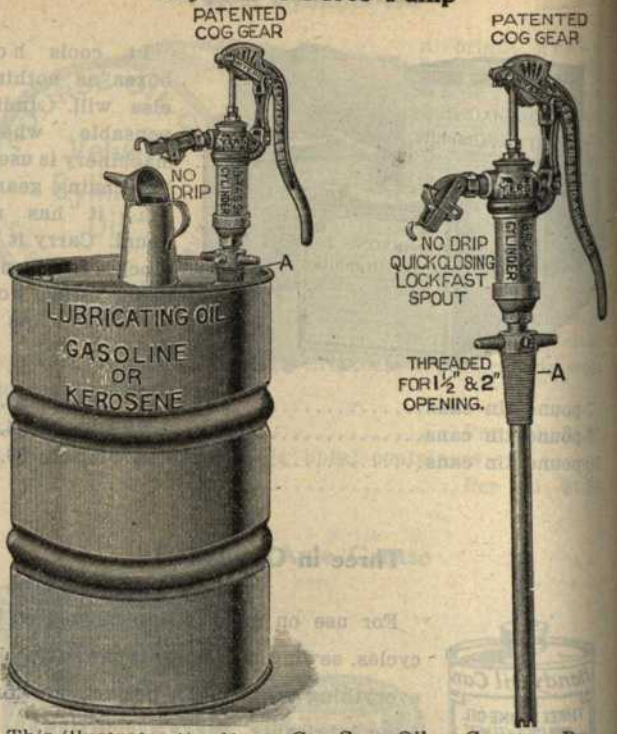
Cap. Gals.	Kind	Weight, lbs.	Each
30	Pump	20	$14.30
60	Pump	30	$16.00
110	Pump	45	$23.10
30	Faucet	18	$10.00
60	Faucet	20	$12.50
110	Faucet	40	$19.00

"Handy Ben" Grease Pump

This Grease Pump shoots one pound of grease at each revolution of the crank.

Pump and Truck complete, barrel not included.....$15.50
Truck only.....Each, $ 3.50
Tongue only for Truck.....Each, $ 2.00

Myers Oil Force Pump



This illustrates the Myers Cog Gear Oil or Gasoline Pump attached direct to the large opening in the steel drum or wooden oil barrel, either on head or side. The connection (a) between the pump and barrel is tapered and so threaded that it can be used in either a 1½-inch or 2-inch standard thread opening in the steel barrel or drum. Can also be screwed into an enlarged opening in the head or bung of a wooden barrel.

The suction pipe of the Pump passes through this connection and is held rigidly in position by a set screw. The Pump can be raised or lowered as desired. Handle is reversible.

The Pump has a 2½-inch brass cylinder with brass valve seat and canvas packed plunger, and quick closing, lockfast faucet spout, which shuts off the flow instantly preventing the oils from dripping. Is a great time saver.

The idea in furnishing the above Pump is to equip the garage, either public or private, with a low-priced pump that will do away with expensive tanks and the usual amount of labor necessary to empty the oil drum. By using the Myers Pump the ordinary barrel can be located at any convenient place and the oil pumped direct from the barrel to the measure.

This pump can also be used with a hose for forcing oil to any desired place by simply screwing the hose nipple into the Pump in place of the faucet.

This outfit includes the Pump, with 40½ inches of 1-inch pipe; special threaded casting, and lockfast faucet suitable for padlock. Barrel not included.

No. R255½.....Each, $20.30

Transfer Pump

Used for transferring oil from one container to another. Light to handle but substantially built. Easy to operate.

No. W501.....Each, $6.00

Yale Padlocks

Black steel case. Brass plated malleable shackle. Warded mechanism with 6 key changes. Two keys.
No. 453J—1½-inch.....Each, $0.40
No. 455J—2 -inch.....Each, $0.55

10 in a carton.

2-inch black steel case. Nickeled steel shackle. Warded mechanism with 6 key changes. Two keys.
No. 115J.....Each, $0.70

10 in a carton.

1¾-inch steel brass plated case, nickel plated steel shackle. Warded mechanism with 6 key changes. Two keys.
No. 164X.....Each, $0.80

10 in a carton.

2-inch brass plated steel case. Brass plated malleable shackle. Six steel tumblers, with 12 key changes. Two keys.
No. 9465X.....Each, $0.80

10 in a carton.

2⅛-inch cast iron, bower barff finish case, nickel plated steel shackles. Warded mechanism with 6 key changes. Two keys.
No. 235.....Each, $0.90

5 in a carton.

Cast iron case with brass plated panels. Brass plated steel shackle. Warded mechanism with 6 key changes. Two keys.
No. 223—1½-inch.....Each, $0.70
No. 225—2 -inch.....Each, $0.90

223, 10; 225, 5 in a carton.

Black steel case. Nickeled steel shackle. Two lever tumblers and one ward, with 12 key changes. Two keys.
No. 612S—1¼-inch.....Each, $1.10
No. 615S—2 -inch.....Each, $1.30

612S, 10; 615S, 5 in a carton.

2-inch bronze case. Bronze shackle. Two lever tumblers and four wards with 12 key changes. Two keys.
No. 9425B.....Each, $1.75

5 in a carton.

Yale Padlocks—Continued

2¼-inch copper plated iron case. Steel shackle. Warded mechanism with 6 key changes. Two keys.
No. 326.....Each, **$1.85**
5 in a carton.

2-inch iron case, nickeled steel shackle. Four lever tumblers with 144 key changes. Two keys.
No. 485.....Each, **$2.00**
5 in a carton.

Seamless steel case. Nickeled steel shackle. Lever tumbler mechanism, with 48 key changes. Two keys.
No. 563—1½-inch.....Each, **$2.15**
No. 565—2 -inch.....Each, **$2.60**
5 in a carton.

1⅛-inch cast bronze case. Nickeled steel shackle. Four pin tumblers, with 1,200 key changes. Two keys.
No. 1701.....Each, **$2.60**
5 in a carton.

1-inch brass case. Cast brass shackle. Two lever tumblers with 12 key changes. Two keys.
No. 1671V.....Each, **$0.75**
10 in a carton.

2-inch cast iron case. Buffed bronze shackle. Four pin tumblers, with 144 key changes. Two keys.
No. 805F.....Each, **$2.70**
5 in a carton.

2-inch seamless steel case. Steel shackle. Three lever tumbler mechanism, with 144 key changes. Two keys.
No. 8454.....Each, **$3.50**
5 in a carton.

2-inch cast bronze case. Bronze shackle. Four lever tumblers with 144 key changes. Two keys.
No. 853.....Each, **$4.20**
5 in a carton.

Cast bronze case. Case-hardened steel shackle. Five pin tumblers, with practically unlimited key changes. Two keys.
No. K830—1½-inch.....Each, **$3.80**
No. K840—1¾-inch.....Each, **$4.70**
No. K850—2 -inch.....Each, **$5.50**
5 in a carton.

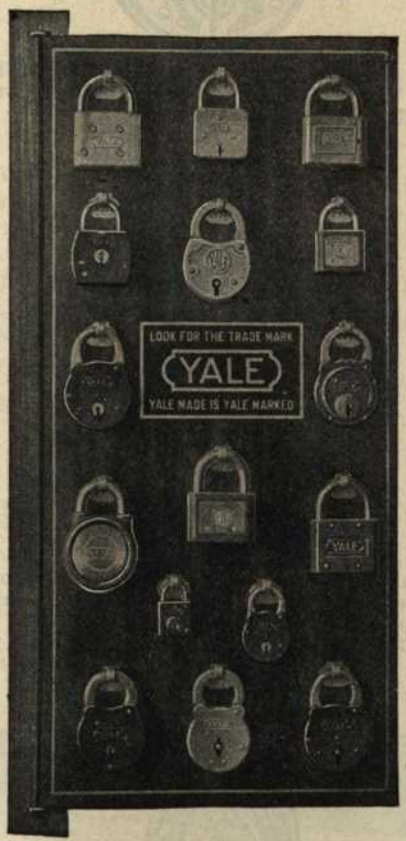
Yale Padlocks—Continued

1½-inch steel case. Nickled steel shackle with 1¼-inch clearance. Lever tumbler mechanism, with 48 key changes. Two keys.

No. 3563.....Each, $2.40

5 in a carton.

No. H16 Yale Padlock Display Board



An assortment of popular selling Padlocks, ranging in price from 30 cents to $1.35. A number for practically every purpose. This Display Board is attached to the uprights of the shelving, without occupying additional space. Size of metal panel 23¼x11⅜ inches, mahogany finish. One each of the following Yale Padlocks are mounted on this board:

No. 115X	No. 235	No. 575J	No. 1671J
No. 164X	No. 326	No. 605V	No. 9425B
No. 223	No. 453J	No. 615S	No. 9455J
No. 225	No. 455J	No. 645C	No. 9475Z

No. H16—Complete.....$16.00

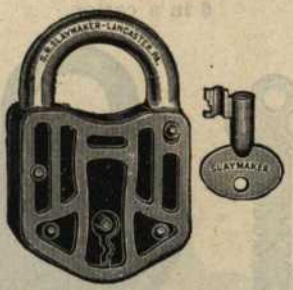
1 in a case; weight 14 lbs.

Slaymaker Padlocks

2-inch black enameled steel case. Nickeled malleable shackle. Bolt and spring mechanism, with 6 key changes. Two flat nickeled steel keys.

No. 6130.....Per doz., $2.50

12 in a carton.



2-inch black enameled steel case. Nickeled malleable shackle. Bolt and spring mechanism, with 6 key changes. Two drilled barrel malleable keys.

No. 4019ND.....Per doz., $3.20

12 in a carton.

2-inch black enameled steel case. Brass plated malleable shackle. Double locking lever construction, with 6 key changes. Two flat nickeled steel keys.

No. 350.....Per doz., $4.20

6 in a carton.

2-inch black enameled steel case. Nickeled steel shackle. Spring levers, with 6 key changes. Two corrugated nickeled steel keys.

No. 4089.....Per doz., $4.80

6 in a carton.

Slaymaker Padlocks—Continued

2-inch pressed steel case, black enameled, with malleable brass plated shackle. Six levers, three plates and heavy steel springs, with 12 key changes. Two drilled, barrel, double bitted nickeled keys.

No. 261.....Per doz., $5.00

6 in a carton.

2-inch rust-proofed steel case. Steel rust-proofed shackle. Spring levers, with 6 key changes. Two heavy nickeled steel keys.

No. 147.....Per doz., $7.20

6 in a carton.

1¼-inch polished brass case. Steel rust-proofed shackle. Spring levers, with 6 key changes. Two flat steel nickeled keys.

No. 178.....Per doz., $5.50

12 in a carton.

1⅝-inch polished cast brass case. Extra long shackle is steel rod rust-proofed, spring action and positive stop; 1⅜ inches long by ⅞ inch wide inside measurements. Spring lever construction with 32 key changes. Two corrugated nickeled steel keys.

No. TL1902.....Per doz., $8.40

6 in a carton.

Polished brass case. Shackle is nickeled steel rod, spring opening, self-locking, positive stop. Spring levers. Two flat steel nickeled keys.

No. 3902—1⅝ inch case.....Per doz., $7.70

No. 3301—2⅛ inch case.....Per doz., $9.70

No. 3901, 6; No. 3902, 12 in a carton.

2⅛-inch polished cast brass case. Bright finish brass shackle. Tumbler and bolt mechanism, with 6 key changes. Two flat nickeled steel keys.

No. 921.....Per doz., $10.00

6 in a carton.

Black rust-proofed iron case with brass panels. Brass plated steel shackle. Spring levers and wards, with 6 key changes. Two flat nickeled steel keys.

No. 189—1½ inch case.....Per doz., $ 9.50

No. 190—2 inch case.....Per doz., $12.00

6 in a carton.

2-inch black rust-proofed iron case. Buffed bronze shackle. Four pin tumblers with 144 key changes. Two flat nickeled steel keys.

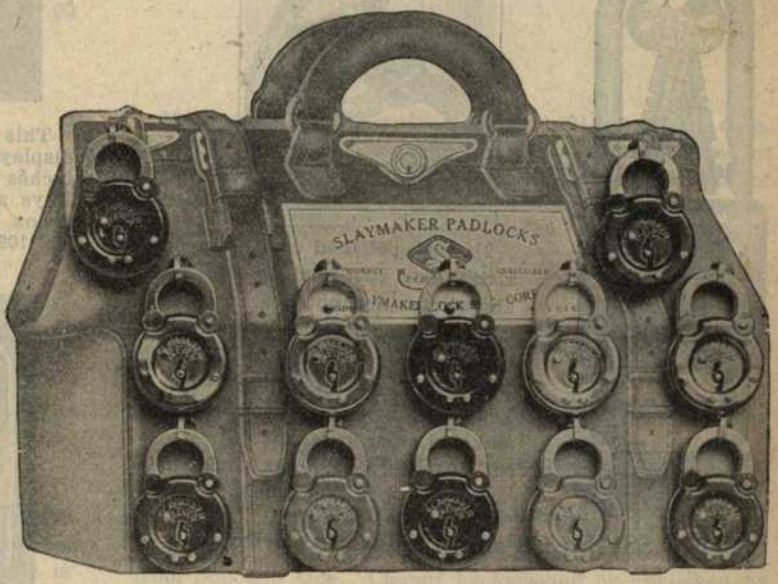
No. 160.....Per doz., $22.00

6 in a carton.

Slaymaker Padlocks—Continued

No. TW94 is an assortment of one dozen popular selling padlocks, in different styles and finishes, all 2-inch sizes, mounted on a card 12½x16¾ inches, cut out to represent a traveling bag, with wire easel back, packed complete in a box. Assortment consists of 2 each Nos. 4012 Brass, 6130 Black,, 6131 Brass, 4011 Black, 14012 Brass, and 16046 Black. Weight 3¾ lbs.

No. TW94.....Per Asst., **$3.00**



No. TW261 is an assortment of one dozen heavy six lever padlocks, in six different styles and finishes, mounted on a card 12½ x16¾ inches, cut out to represent a traveling bag, with wire easel back, packed complete in a box. Assortment consists of 3 each Nos. 262 Brass, 261 Black, 2 each Nos. 261 Blue, 261 Green, and 261 Red. Weight 5½ lbs.

No. TW261.....Per Asst., **$5.50**

No. TW192 is an assortment of one dozen popular selling padlocks, in six different styles and finishes, mounted on a card 12½ x16¾ inches, cut out to represent a traveling bag, with wire easel back, packed complete in a box. Assortment consists of 2 each Nos. 147 Black, 145 Brass, 4089 Black, 196 Black, 262 Brass, and 1351 Brass. Weight 4¾ lbs.

No. TW192.....Per Asst., **$7.00**

Slaymaker Padlocks—Continued

Showing application to bracket that is equipment on over 40 makes of cars.

1⅝-inch polished cast brass case. Steel rust-proofed shackle. Brass bolts and tumblers, with 16 key changes. Two corrugated steel nickeled keys. Shackle opening ⅝ in. wide above, $\frac{1}{16}$ in. below, 1½ in. long, adjustable to ⅞ in., insuring a perfect fit on tire carriers for which it is particularly adapted.

No. 1098.....Per doz., **$15.00**

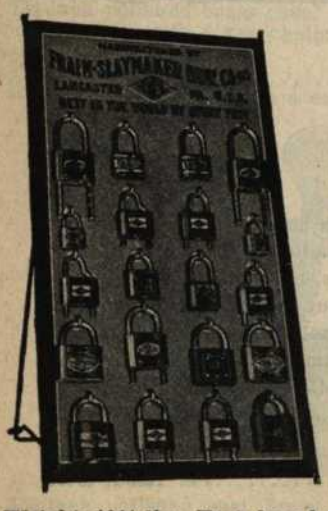
12 in a carton.

2⅛-inch polished cast brass case. Extra long rust-proofed steel shackle with milled notches. Inside dimensions open, 1⅛ in. wide, 4½ in. long. Closes down to ⅝ inch. Brass bolts and tumblers with 64 key changes. Two corrugated nickeled steel keys.

No. 1093.....Per doz., **$15.00**

6 in a carton.

No. SS1 Steel Panel Padlock Assortment



For use as a swinging sample board or steel shutter by simply inserting 2 screweyes in the upright of shelving or show case. It is reversible so that it can face the store entrance on either side. Equipped with wire easel for standing on counter and rigidly clamped out of sight back of the deep beveled edges when not in use. Displays 20 sample locks selected as the most popular and best selling numbers with the Automotive Equipment Dealers. Board beautifully lithographed in cardinal blue, bright red and gold. Size of board, 12¾ x 23¼ inches. Weight, 10½ lbs. Each board carefully wrapped and packed in a sealed container. The following locks are displayed:

4 No. 1098	2 No. 991	1 No. 4089	1 No. 993
2 No. 1903	2 No. 3901	1 No. 189	1 No. 158
2 No. TL1902	2 No. 3903	1 No. 189X	1 No. 160

No. SS1.....Per Asst., **$22.00**

This card is beautifully lithographed in four colors and displays one dozen No. 1098 padlocks. Card is 12¾x16¼ inches with wire easel back and is a splendid sales help. Keys are attached to back of card. Packed complete in a box. Weight 5 lbs.

No. 1098A.....Per Asst., **$15.50**

An assortment of one dozen popular selling padlocks especially adapted to motorist trade. Card is heavy binder-board attractively lettered in blue and white, with wire easel back. Assortment consists of 2 each Nos. 1093, TL1902, 1908, 4089, 1 each Nos. 993, 992, 196RP and 160. Packed complete in a box. Weight 5½ lbs.

No. A10.....Per Asst., **$12.50**

Chain Bolts

On 6-inch size the plate is 2 inches wide, ¾ inch round bolt with chain 24 inches long. On 8-inch size the plate is 7 inches long, ¾-inch bolt with chain 24 inches long. On 10-inch size the plate is 3⅜ inches wide, ⅞-inch round bolt with chain 24 inches long. Bolt is reversible by removing a set screw. Furnished complete with one strap and one angle staple as illustrated. Packed ½ dozen in a box with screws. Japanned finish.

No. 1055J- 6— 6-inch. . . . . Per doz., $11.50
No. 1055J- 8— 8-inch. . . . . Per doz., $18.90
No. 1055J-10—10-inch. . . . . Per doz., $27.00

Foot Bolts

On 6-inch size the plate is 2 inches wide, ⅝ inch bolt, 1 inch stroke. Floor plate is 1⅜x2⅜ inches. On 8-inch size the plate is 2¾ inches wide, ¾-inch bolt, 1⅝-inch stroke. Floor plate 1⅜x2⅜ inches. On 10-inch size the plate is 3⅜ inches wide, ⅞-inch bolt, 1¼-inch stroke. Floor plate is 2x2⅜ inches. Floor plate has oval shaped hole to allow for shrinkage in the door. Both cap and release are of solid bronze. Springs are sheradized to prevent rusting. Packed ½ dozen in a box with screws. Japanned finish.

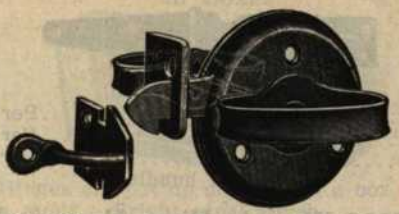
No. 1056J- 6— 6-inch. . . . . Per doz., $10.80
No. 1056J- 8— 8-inch. . . . . Per doz., $18.40
No. 1056J-10—10-inch. . . . . Per doz., $25.90

Star Gravity Barn Door Catch

Fastens to the side of building and automatically catches the door and holds it open. Packed 1 dozen in a box. Japanned finish.

No. 177. . . . . Per doz., $2.00

Cannon Ball Door Latch



For use on either swinging or sliding doors and either right or left hand. Latches automatically, and the latch guard makes it almost impossible to open by accident. Will fit any thickness of doors up to 2½ inches, and has a handle on both sides of the door. Packed ½ dozen in a box. Japanned finish.

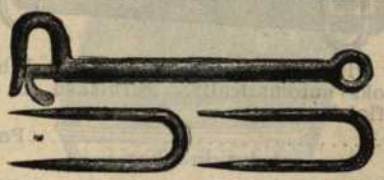
No. 614. . . . . Per doz., $9.60

Heavy Door Latch

Made entirely of wrought steel and will not break. Combination square and countersunk holes permit the use of either bolts or countersunk screws. Extreme length of handle is 10½ inches. Bar is 12 inches long. Packed one in a box, with screws. Japanned finish.

No. 1252J. . . . . Per doz., $17.90

"Covert" Safety Gate and Scuttle Hooks



A secure lock for gates, doors, etc. Cannot be opened from opposite side. Cannot be loosened or unhooked by an animal. Tinned finish. Packed ¼ gross in a box.

No. 44403—3-in. . . . . Per Gro., $22.80
No. 44404—4-in. . . . . Per Gro., $26.80
No. 44405—5-in. . . . . Per Gro., $30.50
No. 44406—6-in. . . . . Per Gro., $35.20

Buffum Gate and Door Hooks

Self-locking; live stock can't unfasten; cannot be unlocked by jarring from opposite side of door or gate; sleet or rust can't affect this Hook; no springs to rust or freeze up, or stamped parts to break. Made of malleable, not cast iron, so it is unbreakable. Can be locked with small padlock if desired. Natural finish. Packed 1 doz. hooks with staples in a box.

No. 1—4½-inch. . . . . Per doz., $3.60
No. 2—7 -inch. . . . . Per doz., $4.80

No. 912 Wrought Hinge Hasps

Bright Steel Finish.

3 inches.....Per doz., 2.10
4½ inches.....Per doz., 2.45
6 inches.....Per doz., 3.25

2 in a bundle.

No. SC912 Wrought Hinge Hasps in Boxes

These Hinge Hasps are put up 1 in a box, with enough screws to apply. Bright steel finish.

3 inches.....Per doz., 3.20
4½ inches.....Per doz., 3.30
6 inches.....Per doz., 4.20

No. 941 Extra Heavy Wrought Hinge Hasps

Made in one size only. 7½ inches extreme length, width 1¾ inches and ⅛ inch thick. Plain steel finish. Staple is included but no screws.

No. 941—7½ inches.....Per doz., 8.65

½ dozen in a box.

No. 981 Automatic Hasps and Staples

Does away with the necessity for hooks. When hasp is closed it hooks automatically. Furnished in 8-inch size only. Plain finish.

No. 981.....Per doz., 1.90

1 doz. in a box.

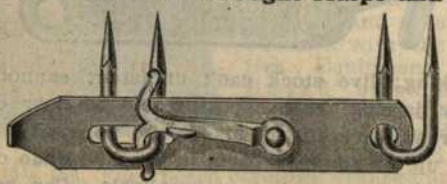
No. 980 Plain Wrought Hasps and Staples

Bright Steel Finish.

6 inches.....Per doz., 1.00
7 inches.....Per doz., 1.10
8 inches.....Per doz., 1.30
10 inches.....Per doz., 2.00

1 doz. in a box.

No. 982 Double Hook Wrought Hasps and Staples

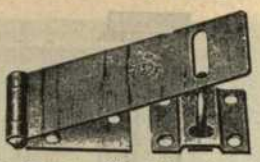


Bright Steel Finish.

6 inches.....Per doz., 1.40
7 inches.....Per doz., 1.60
8 inches.....Per doz., 1.80
10 inches.....Per doz., 2.50

1 doz. in a box.

No. 915 Safety Hasps



Impossible to take hasps off without unlocking. Bright steel finish. Movable staples.

4½ inches.....Per doz., 4.20
6 inches.....Per doz., 5.95

½ dozen in a box.

No. SC915 Safety Hasps in Boxes

Same as above except put up 1 in a box with screws.

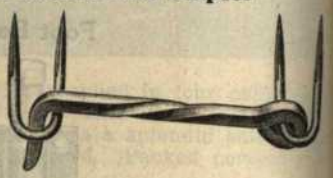
4½ inches.....Per doz., 6.00
6 inches.....Per doz., 8.60

No. 972 Wrought Hooks and Staples

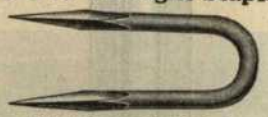
Bright Steel Finish.

4 inches...Per gross, 12.00
5 inches...Per gross, 15.00
6 inches...Per gross, 18.00

¼ gro. in a box.



No. 976 Wrought Staples

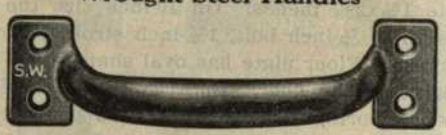


Bright Steel Finish.

1¾ inches.....Per gross, 1.50
2 inches.....Per gross, 1.70
2½ inches.....Per gross, 2.35
3 inches.....Per gross, 3.20

1¾ to 2½-inch, 1 gro.; 3-inch, ½ gro. in box.

Wrought Steel Handles



Made of cold rolled wrought steel. Very smooth surface and clean cut edges. A strictly high class article. Actual length is 6½ inches; plates 1¾ inches wide. Japanned finish.

No. 482J-3.....Per doz., 2.50

1 dozen in a box with screws.

Star Offset Hinges

These hinges are for use on the hay door in the gable end of the barn, when hay is taken in at the end of the barn. They are made of malleable iron and the upper and lower parts of the hinge are held together by steel pin and cotter. Finished in gray enamel. Weight per pair, 3 lbs.

Star Offset Hinges.....Per doz. pairs, 12.00

No. 900 Wrought Steel Light Strap Hinges

Bright steel finish. 3 pairs in a bundle.

3 inches. . . . . Per doz. pairs, 2.00
4 inches. . . . . Per doz. pairs, 2.70
5 inches. . . . . Per doz. pairs, 2.95
6 inches. . . . . Per doz. pairs, 4.20

No. 902 Wrought Steel Heavy Strap Hinges

Bright steel finish. 3 pairs in a bundle.

4 inches. . . . . Per doz. pairs, 2.75
5 inches. . . . . Per doz. pairs, 3.80
6 inches. . . . . Per doz. pairs, 4.65
8 inches. . . . . Per doz. pairs, 7.75
10 inches. . . . . Per doz. pairs, 11.90

No. 904 Wrought Steel Light Tee Hinges

Bright steel finish. 3 pairs in a bundle.

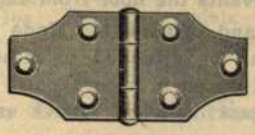
3 inches. . . . . Per doz. pairs, 2.15
4 inches. . . . . Per doz. pairs, 2.65
5 inches. . . . . Per doz. pairs, 3.25
6 inches. . . . . Per doz. pairs, 3.90

No. 908 Wrought Steel Extra Heavy Tee Hinges

Bright steel finish. 3 pairs in a bundle.

4 inches. . . . . Per doz. pairs, 4.25
5 inches. . . . . Per doz. pairs, 4.50
6 inches. . . . . Per doz. pairs, 5.65
8 inches. . . . . Per doz. pairs, 9.65
10 inches. . . . . Per doz. pairs, 13.75

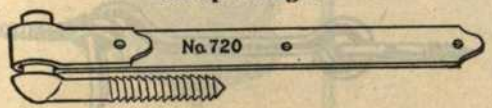
No. 938 End Gate Hinges



Length of Joint 2⅛ inches, width open 4¾ inches. Bright steel finish.

No. 938. . . . . Per doz. pairs, 2.75

No. 720 Wrought Steel Screw Hook and Strap Hinges



Size, ins.	Wt. per pair, lbs.	Per 100 lbs.
6	1½	$14.00
8	2¾	$14.00
10	3	$14.00
12	3¼	$14.00
14	6	$13.30
16	6½	$13.30
18	7½	$13.30

No. SC900 Wrought Steel Light Strap Hinges in Boxes

These Hinges are put up one pair in a box, with enough screws to apply. Bright steel finish.

3 inches . . . . . Per doz. pairs, 3.05
4 inches . . . . . Per doz. pairs, 3.95
5 inches . . . . . Per doz. pairs, 4.35
6 inches . . . . . Per doz. pairs, 5.70

No. SC902 Wrought Steel Heavy Strap Hinges in Boxes

These Hinges are put up one pair in a box, with enough screws to apply. Bright steel finish.

4 inches . . . . . Per doz. pairs, 4.50
5 inches . . . . . Per doz. pairs, 5.60
6 inches . . . . . Per doz. pairs, 6.90
8 inches . . . . . Per doz. pairs, 10.60
10 inches . . . . . Per doz. pairs, 15.20

No. SC904 Wrought Steel Light Tee Hinges in Boxes

These Hinges are put up one pair in a box, with enough screws to apply. Bright steel finish.

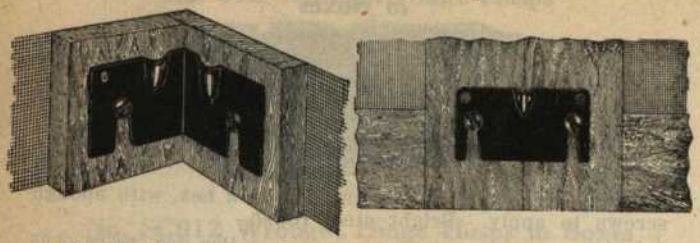
3 inches . . . . . Per doz. pairs, 3.00
4 inches . . . . . Per doz. pairs, 3.65
5 inches . . . . . Per doz. pairs, 4.15
6 inches . . . . . Per doz. pairs, 5.50

No. SC908 Wrought Steel Extra Heavy Tee Hinges in Boxes

These Hinges are put up one pair in a box, with enough screws to apply. Bright steel finish.

4 inches . . . . . Per doz. pairs, 5.75
5 inches . . . . . Per doz. pairs, 6.50
6 inches . . . . . Per doz. pairs, 8.05
8 inches . . . . . Per doz. pairs, 13.90
10 inches . . . . . Per doz. pairs, 17.50

Porch Screen Couplings



No. 15J Corner Coupling No. 16J Flat Coupling

Designed for coupling sections of porch screens, etc. In taking down the screens simply loosen the screws and the couplings slip out. The small hole is for tacking the coupling to the screen when not in use, to prevent loss. Packed 1 gross in a box with screws. Japanned finish.

No. 15J—Corner Couplings . . . . . Per gro., $5.60
No. 16J—Flat Coupling . . . . . Per gro., $4.60

Wrought Steel Corner Irons

Good for repairing screens, doors, etc. Packed 2 dozen in a box. Bright finish.

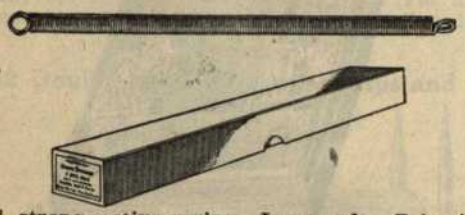
No. 997A—1 -inch. . . . . Per gro., $ 3.20
No. 997B—1½-inch. . . . . Per gro., $ 4.10
No. 997C—2 -inch. . . . . Per gro., $ 5.30
No. 997D—2½-inch. . . . . Per gro., $ 7.00
No. 997E—3 -inch. . . . . Per gro., $ 8.40
No. 997F—3½-inch. . . . . Per gro., $12.00

Thumb Latches

For medium or light doors. Handle is 6¾ inches long. Packed one in a box with screws. Japanned finish.

No. 1250J-2. . . . . Per doz., $3.50

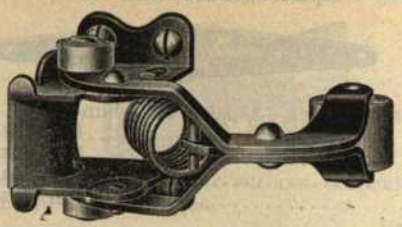
Screen Door Springs



A good, strong, active spring. Loop ends. Price includes screw hooks. Packed 1 dozen in a box, with screw hooks. Japanned finish.

No. 1—$\frac{11}{64}$-inch outside diameter. . . . . Per doz., $0.80
No. 2—$\frac{13}{64}$-inch outside diameter. . . . . Per doz., $0.90
No. 3—$\frac{11}{32}$-inch outside diameter. . . . . Per doz., $1.00
No. 4—$\frac{3}{8}$-inch outside diameter. . . . . Per doz., $1.10
No. 5—$\frac{7}{16}$-inch outside diameter. . . . . Per doz., $1.30
No. 6—½-inch outside diameter. . . . . Per doz., $1.60

Screen Door Catches



Made of heavy steel, securely riveted with best oil-tempered springs. Rubber bumpers of excellent quality. Very substantial. Never misses and will positively hold door closed tightly. Packed 1 dozen complete Latches with screws in a box. Japanned finish.

No. 210J. . . . . Per doz., $3.80

Screen Door Pulls

Made of wrought steel. Extreme length, 4⅞ inches. Packed 1 dozen in a box, complete with screws. Japanned finish.

No. 479J. . . . . Per doz., $0.70

Screen Door Buttons

Made of wrought steel. Smooth finish and lighter and stronger than cast buttons. Packed 1 gross in a carton. Japanned finish.

No. 4CJ—1½-inch . . . . . Per gro., $1.10
No. 4AJ—1¾-inch . . . . . Per gro., $1.25
No. 4BJ—2 -inch . . . . . Per gro., $1.40

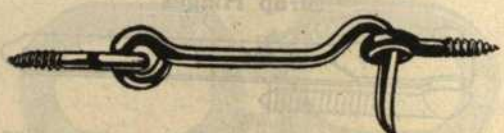
Anti-Sag Screen Door Braces

Prevents the door from sagging.

Simply a rod and turnbuckle. Made in either 21 or 42-inch length. Can be attached to either upper or lower panel. Packed 1 dozen in a cardboard box; 12 boxes in a carton. Screws are included. Black enamel finish.

No. 1142—42-inch . . . . . Per doz., $2.10
No. 1121—21-inch . . . . . Per doz., $1.90

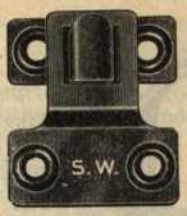
Bright Wire Hooks and Eyes



Bright steel finish. Packed 1 gross in a box. Price includes screw eye for each end of hook.

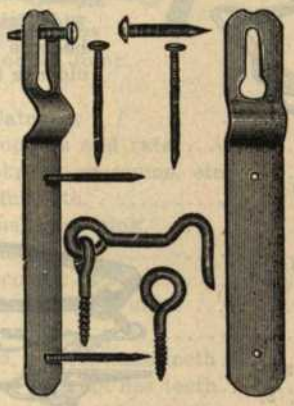
1½-inch. . . . . Per gross, $1.90
2 -inch. . . . . Per gross, $2.40
2½-inch. . . . . Per gross $3.00
3 -inch. . . . . Per gross $3.60

Screen Hangers



These hangers are used for full length screens. Width of hook plate 2⅝ inches. Length of eye plate 3 inches. Packed 1 dozen sets in a box, with screws. Weight per dozen sets, 2 lbs. Japanned finish.

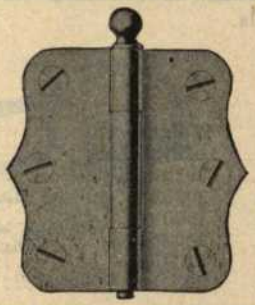
No. 1724J.....Per doz. sets, $1.40



These hangers are used for half-length screens. Made of ⅝-inch steel 4 inches long. Packed 1 dozen sets in a box. Weight per dozen sets, 1½ lbs. Japanned finish.

No. 1915½.....Per doz. sets, $1.40

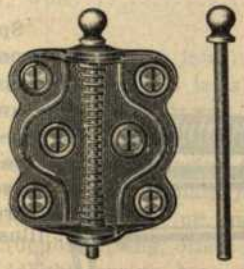
Screen Door Hinges



3-inch size. These hinges are made of wrought steel with loose pin. To be used on surface of the door. Packed ½ dozen pairs in a box, complete with screws. Weight per dozen pairs, 7 lbs. Japanned finish.

No. 1751J.....Per doz. pairs, $3.20

Screen Door Spring Hinges



3-inch size. To be applied to the surface of the door. Has loose pin which permits the door being taken down without the use of tools. Pins are easily pulled out but will not work out in use. Corrugations add strength, and holes are countersunk for No. 8 screw. Packed ½ dozen pairs in a carton. Weight per dozen pairs, 6 lbs. Japanned finish.

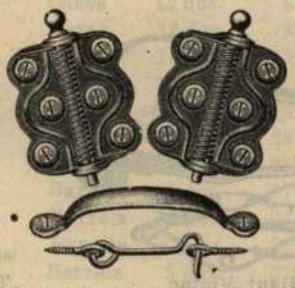
No. 151J.....Per doz. pairs, $3.80

Screen Door Spring Hinges

3-inch size. To be applied to the surface of door. Similar to No. 151J except does not have the loose pin, and No. 158J has the spring covered with a shield of steel. Packed ½ dozen pairs in a carton. Weight per dozen pairs, 6⅜ lbs. Japanned finish.

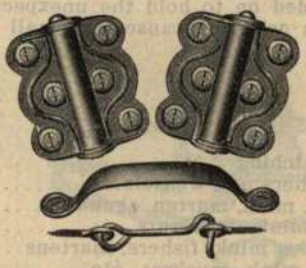
No. 158J.....Per doz. pairs, $3.60

Screen Door Sets



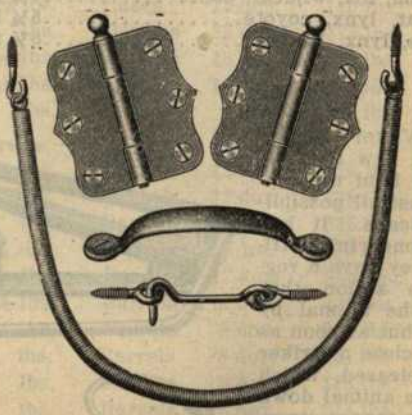
This set consists of one pair of 151J 3-inch Spring Hinges, one 4⅞-inch Steel Pull and one 2½-inch Hook and Eye. Packed 1 set in a carton, complete with screws. Weight per dozen sets, 9 lbs. Japanned finish.

No. 1157J.....Per doz. sets, $5.60



This set consists of one pair No. 158J 3-inch Spring Hinges, one 4⅞-inch Steel Pull and one 2½-inch Hook and Eye. Packed 1 set in a carton, complete with screws. Weight per dozen sets, 9 lbs. Japanned finish.

No. 1158J.....Per doz. sets, $5.10

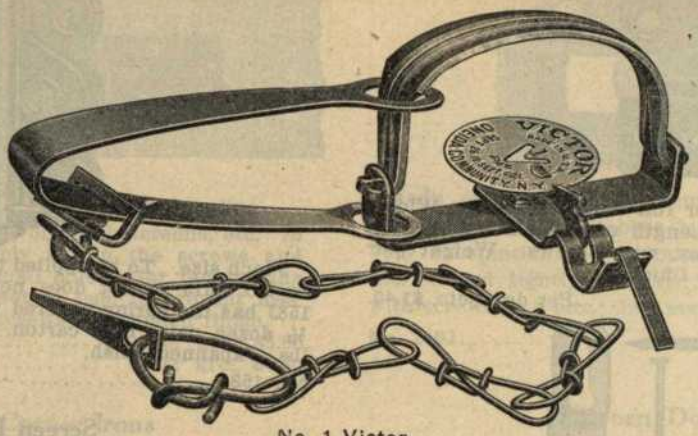


This set consists of one pair No. 1751J 3-inch plain Hinges, Door Pull, Hook and Spring, together with the necessary screws and screw eyes. Packed 1 set in a carton, 12 sets in a box. Weight per dozen set, 14 lbs. Japanned finish.

No. 1750J.....Per doz. sets, $4.50

Victor Game Traps

The Victor is the world's standard Game Trap and is used by about 80 per cent of the best trappers of this and foreign countries. Made by a firm with 80 years' experience in trap making. Guaranteed against defects in materials and workmanship.



No. 1 Victor.

The standard sizes of Single Spring Trap Nos. 0, 1 and 1½ are identical with the illustration of No. 1. All have ribbed steel jaws, superior springs and the patented "humped cross" — the most satisfactory pan fastening, as it has no wide friction surfaces to become tight and no enclosure to hold dirt.

No. 1 Giant Victor

No. 2 Victor.

All Double Spring Victor Traps are similar to the illustration of the No. 2. They differ only in size and weight.

No. 91 Victor.

The Victor Giant Shoulder Catch is a special trap. It has wide-spreading steel jaws that catch high and hold firmly. The spring is extra strong. A fine trap for general use in trapping all small animals, and may be depended on to hold the unexpected animals which so often escape because too small a trap was used.

Nos. 91 and 91½ Victor Traps have double jaw faces. They absolutely prevent escape of animals like skunks and mink by gnawing the foot beneath the jaws. They are strong, durable traps and are good for all small animals.

Single Spring

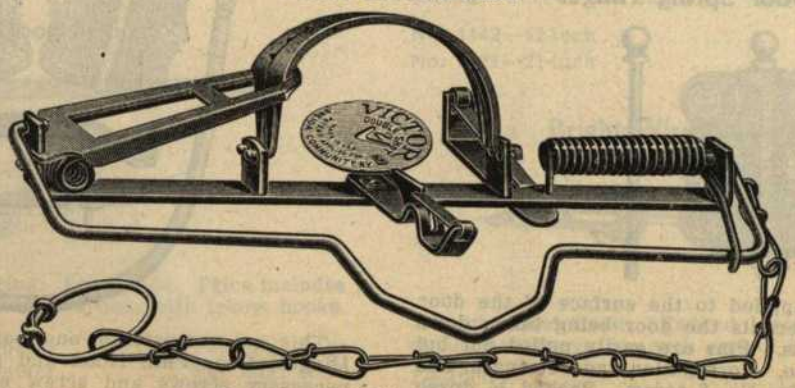
No.	For Catching	Spread of Jaws	Weight Per Doz.	Packed	No. in Bbl.	Weight of Bbl.	Per doz.
0	—Rats, gophers and weasels	3½ in.	5 lbs.	Barrels	55 doz.	293 lbs.	$ 2.44
1	—Muskrats, mink, marten, skunks	4 in.	7½ lbs.	Barrels	40 doz.	308 lbs.	$ 3.06
1½	—Skunks, mink, muskrats	4⅝ in.	11½ lbs.	Barrels	25 doz.	300 lbs.	$ 4.88
1 Giant	—Skunks, mink, fishers, martens	4⅞ in.	8½ lbs.	Barrels	32 doz.	300 lbs.	$ 3.90
91	—Skunks, mink, muskrat, etc	4⅞ in.	8½ lbs.	Barrels	34 doz.	315 lbs.	$ 4.88
91½	—Skunks, fishers	5½ in.	12⅝ lbs.	Barrels	22 doz.	303 lbs.	$ 7.32

Double Spring

2	—Raccoon, fox, wildcat, etc	4⅝ in.	13¾ lbs.	Barrels	16 doz.	240 lbs.	$ 6.72
3	—Wildcat, lynx, coyote	5¼ in.	21½ lbs.	Barrels	10 doz.	240 lbs.	$10.98
4	—Coyote, lynx, beaver	5⅞ in.	24¼ lbs.	Barrels	9 doz.	245 lbs.	$13.42

Victor Double Shot

The Victor Double Shot is a new trap designed to hold the animal against all possibility of escape. It has proved wonderfully efficient. They have a regular trap action that catches the animal by the foot, but as soon as the jaws close a striker bar is released, which forces the animal down so that he cannot struggle to escape.



Special Features—Independent coil springs on jaws and striker bar—low, flat form when set—notched jaws to give added grip—easy to set—no safety catch to remember, or forget. Illustration shows No. 2. No. 2½ does not have plate over spring and has a flat steel striker bar.

No.	For Catching	Spread of Jaws	Weight Per doz.	Packed	No. in Bbl.	Weight of Bbl.	Per doz.
2	—Muskrats	4 in.	14 lbs.	Barrels	11 doz.	177 lbs	$7.37
2½	—Muskrats, skunk, mink	4 in.	17 lbs.	Barrels	10 doz.	197 lbs	$8.54

Oneida Jump Game Traps

Oneida Jump Traps are popular because of their flat, compact form when set. They can be placed where it is difficult to set a long spring trap. These traps are of the highest quality. They have the humped cross, and springs are held by tension—no rivets to weaken the springs. Nos. 91 and 91½ Oneida Jump Traps have double jaw faces to prevent animals from escaping by gnawing off the foot. They are ideal traps for skunks and mink. Nos. 12, 13 and 14 Oneida Jump Traps correspond in size with Nos. 2, 3 and 4. They differ from the regular style only in having teeth on the jaws. Particularly intended for otters and coyotes.

No. 91 Oneida Jump.

No. 1 Oneida Jump.

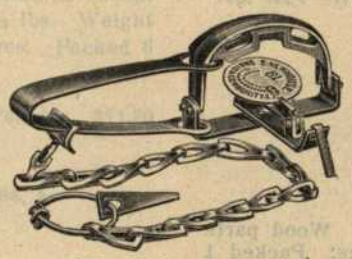
No. 13 Oneida Jump.

No.	For Catching	Spread of Jaws	Weight per Doz.	Packed	No. in Pkg.	Weight of Pkg.	Per Doz.
0	—Weasels, gophers and rats	4 in.	5½ lbs.	Cases	12 doz.	68 lbs.	$ 3.18
1	—Mink, muskrats, opossums, etc.	4¾ in.	8 lbs.	Cases	12 doz.	97 lbs.	$ 3.66
1½	—Skunks, mink, etc.	5¼ in.	9½ lbs.	Cases	12 doz.	127 lbs.	$ 5.62
91	—Skunks, muskrats, mink.	4¾ in.	8½ lbs.	Cases	12 doz.	102 lbs.	$ 5.86
91½	—Skunks, mink, etc.	5¼ in.	11 lbs.	Cases	12 doz.	129 lbs.	$ 7.80
2	—Foxes, raccoons, etc.	5¾ in.	14 lbs.	Barrels	20 doz.	294 lbs.	$ 8.78
3	—Foxes, wildcats, lynx, etc.	6¾ in.	22 lbs.	Barrels	12 doz.	287 lbs.	$12.20
4	—Coyotes, lynx, etc.	7½ in.	27 lbs.	Barrels	9 doz.	270 lbs.	$14.64
12	—Same as No. 2 except has teeth	5¾ in.	14¼ lbs.	Barrels	20 doz.	298 lbs.	$ 9.76
13	—Same as No. 3 except has teeth	6¾ in.	22½ lbs.	Barrels	12 doz.	295 lbs.	$13.66
14	—Same as No. 4 except has teeth	7½ in.	27½ lbs.	Barrels	9 doz.	279 lbs.	$16.10

Newhouse Game Traps

The Newhouse is the highest grade trap made and has been the choice of professional trappers for more than three-quarters of a century. Every trap is fully guaranteed against defects in material and workmanship. There is a Newhouse Trap for every animal from mouse to elephant.

No. 1 Newhouse.



No. 81 Newhouse.

No. 2 Newhouse.

No.	For Catching	Spread of Jaws	Weight per Doz.	Pack	No. in Pkg.	Weight per Pkg.	Per Doz.
0	—Rats, weasels and gophers	3½ in.	6½ lbs.	Cases	12 doz.	85 lbs.	$ 6.10
1	—Muskrats, mink, etc.	4 in.	8⅝ lbs.	Cases	12 doz.	110 lbs.	$ 7.32
1½	—Skunks, mink, fishers	4⅝ in.	14 lbs.	Barrels	25 doz.	375 lbs.	$ 10.98
2	—Fox, fisher, raccoon	4⅝ in.	16½ lbs.	Barrels	15 doz.	273 lbs.	$ 16.48
3	—Otter, coyote, lynx	5½ lu.	29½ lbs.	Barrels	10 doz.	319 lbs.	$ 21.96
4	—Beaver, otter, wolf	6½ in.	37 lbs.	Barrels	8 doz.	319 lbs.	$ 26.84
	Special Patterns of Newhouse Traps.						
81	—Skunks, mink, etc. (webbed jaws)	4 in.	9¼ lbs.	Cases	12 doz.	118 lbs.	$ 8.78
81½	—Skunks and raccoon (webbed jaws)	4⅝ in.	14¼ lbs.	Barrels	22 doz.	338 lbs.	$ 13.18
91	—Skunks, mink, etc. (double jaws)	5¼ in.	10 lbs.	Barrels	31 doz.	335 lbs.	$ 9.76
91½	—Skunks, raccoon, etc. (double jaws)	6¼ in.	15½ lbs.	Barrels	20 doz.	335 lbs.	$ 12.82
2½	—Otters and beavers (single spring teeth)	5½ in.	26 lbs.	Barrels	12 doz.	345 lbs.	$ 26.84
21½	—Coyote, lynx (single spring, plain jaws)	5½ in.	24½ lbs.	Barrels	12 doz.	330 lbs.	$ 20.14
3½	—Beaver and otter (single spring, toothed jaws)	6¾ in.	37½ lbs.	Barrels	8 doz.	328 lbs.	$ 29.38
14	—Beaver, wolf (double spring, offset jaws)	6½ in.	39 lbs.	Barrels	8 doz.	331 lbs.	$ 28.06
48	—Beaver, wolf (double spring, long chain, teeth)	6½ in.	44 lbs.	Barrels	8 doz.	378 lbs.	$ 29.28
4½	—Wolf and cougar (double spring, long chain)	8¾ in.	93 lbs.	Barrels	3 doz.	314 lbs.	$ 65.88
50	—Black bears (double spring, teeth)	9½ in.	144 lbs.	Barrels	2 doz.	313 lbs.	$146.40
150	—Black bears (double spring, teeth, offset jaws)	9½ in.	144 lbs.	Barrels	2 doz.	313 lbs.	$146.40
5	—Bears (double spring and teeth)	11¾ in.	234 lbs.	Barrels	1 doz.	271 lbs.	$204.96
15	—Bears (double spring, offset jaws)	11¾ in.	234 lbs.	Barrels	1 doz.	271 lbs.	$204.96
6	—Grizzly bears (double spring, teeth)	16 in.	522 lbs.	Barrels	⅛ doz.	213 lbs.	$439.20

Sure Catch Mouse and Rat Traps

Hardwood base. Coppered tempered steel spring. Mouse traps are 2x3⅞ inches. Packed ½ dozen in a carton, 2½ gross in a container, with a total shipping weight of 29 lbs. Rat traps are 3½x7 inches. Packed 1 dozen in a carton, ½ gross in a container, with a total shipping weight of 35 lbs.

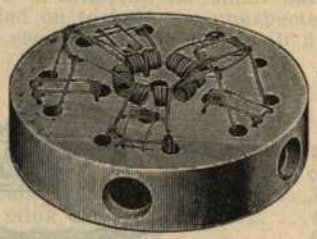
Sure Catch Mouse Traps . . . . . Per gro., $5.00
Sure Catch Rat Traps . . . . . Per doz., $1.75

Delusion Mouse Traps

Automatic in operation. Requires no setting. Size 5⅛x3¾ x2⅝ inches. Wood parts stained red. Tin parts nicely lacquered. Packed ½ gross in a case, with a total shipping weight of 58 lbs.

Delusion Mouse Traps . . . . . Per doz., $4.50

Wood Choker Mouse Traps



Easy to set and goes off easily. 4 holes. Wood parts stained red. Tinned, tempered steel springs. Packed 1 gross in container, with total shipping weight of 41 lbs.

Wood Choker Mouse Traps . . . . . Per doz., $1.90

Traps in Bushel Baskets

Traps are furnished in bushel baskets in various quantities as listed. There is no charge for the basket, and it provides a good display for selling the traps.

No. 1—Bushel basket with 2½ gross Sure Catch Mouse Traps $12.50
No. 2—Bushel basket with 4½ dozen Sure Catch Rat Traps . . . . . $ 7.80
No. 3—Bushel basket with 1½ gross Sure Catch Mouse and 2 1/6 dozen Sure Catch Rat Traps $11.30

Short Stop Mouse and Rat Traps

Hardwood base. Coppered tempered steel spring. Metal trigger. Mouse traps are 2x3⅞ inches. Packed ½ dozen in a carton, 2½ gross in a container, with a total shipping weight of 29 lbs. Rat traps are 3½x7 inches. Packed 1 dozen in a carton, ½ gross in a container, with a total shipping weight of 35 lbs.

Short Stop Mouse Traps . . . . . Per gro., $4.80
Short Stop Rat Traps . . . . . Per doz., $1.70

Circular Spring Balances, Series C

Cast Iron Backs. 4-inch Dials. Brass Front adjusted by set screw in pointer. To weigh 30 lbs. by 1 oz. Weight 4 lbs. Packed 1 in box.

No. 120 . . . . . Each, $9.70

Ice Balances, Series B

Heavy Japanned Cast Iron Case. Figures and lines stamped in metal. Regulated by set screw in bottom of case. Packed 1 in box.

No. 402—To weigh 200 lbs. by 2 lbs. Weight packed 6 lbs. Length over all 15½ inches . . . . . Each, $ 9.60
No. 403—To weigh 300 lbs. by 5 lbs. Weight packed 6 lbs. Length over all 15¾ inches . . . . . Each, $12.00

Heavy Straight Spring Balances, Series A1

Brass Front Figures and lines stamped in metal. No. 84, Japanned Stamped Steel Case. No. 86, Japanned Cast Iron Case. Packed 3 in box.

No. 84—To weigh 50 lbs. by 1 lb. Weight packed 10 lbs. per doz. Length over all 12¾ in . . . . . Each, $1.80
No. 86—To weigh 80 lbs. by 1 lb. Weight packed 28 lbs. per doz. Length over all 16½ in . . . . . Each, $5.00

"Universal" Spring Balances, Series A

Japanned Stamped Steel Case. Brass-Plated Front. Figures and lines stamped in metal.

No. 3 packed 1 dozen in box; No. 51, ½ dozen in box.

No. 3—To weigh 25 lbs. by ½ lb. Weight packed 2 lbs. per doz. Length over all 7½ in..Per doz., $3.70

No. 51—To weigh 50 lbs. by 1 lb. Weight packed 4 lbs. per doz. Length over all 10 in...Per doz., $7.40

Same material and construction as Nos. 3 and 51 except with Round Tin Pan. To weigh 25 lbs. by ½ lbs. Weight 6 lbs. per dozen. Length over all 16½ inches. Packed 6 in box.

No. 52R—With Round Tin Pan.....Per doz., $11.20

Circular Spring Balances, Series C

7-inch Enameled Dial. Green Enameled Sash trimmed with Gilt. Even number pounds printed in red on gilt background. Heavy sheet Metal Back adjusted by set screw at bottom of slide.

Furnished in two ways, No. 685 with Hook only on bottom of scale, or No. 685E with 11-inch Porcelain Enameled Pan. Tinned Bows.
Packed 1 in box.

No. 685 —To weigh 20 lbs. by 1 oz. Weight packed 2 lbs. Length over all 11½ in.....Each, $5.40

No. 685E—To weigh 20 lbs. by 1 oz. Weight packed 4¼ lbs. Length over all 23 in.....Each, $7.40

Family Scales

To weigh 24 lbs. by ounces. 6-inch white enamel slanting dial. 5½-inch square steel top. With or without seamless tinned scoop. Heavy sheet steel frame. Finished in black enamel, decorated in gilt. Height over all 12 inches.
No. 16021, weight packed 60 lbs. per dozen.
No. 6021, weight packed 51 lbs. per dozen.
Packed ½ dozen in case.

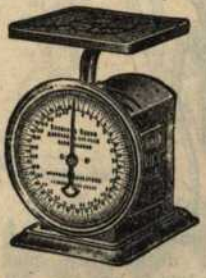
No. 16021—With Scoop.....Each, $4.00
No. 6021—Without Scoop.....Each, $3.50

To weigh 20 lbs. by ounces. 7-inch white slanting dial with Glass Sash and polished nickel-plated rim. 5½-inch square steel top. Heavy sheet steel frame. Finished in Blue Enamel, decorated in Gilt. Height over all 8½ inches. Weight packed 65 lbs. per dozen. Packed 1 in a carton.

No. 4221—Without Scoop.....Each, $4.50

Weighs 24 pounds by ounces. 6-in. white enamel vertical dial. 5½-in. square top. With seamless tinned scoop. Heavy sheet steel frame. Finished in Black Enamel. Decorated in Gilt. Height over all 12 in. Weight packed 60 lbs. per dozen. Packed 1 in a carton.

No. 11021—With Scoop.....Each, $4.00

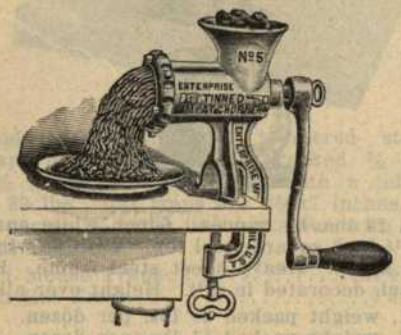


To weigh 60 lbs. by 2 ounces. 8-inch white enamel vertical dial. 7-inch square steel top. Heavy sheet steel frame. Finished in Black Enamel, Decorated in Gilt. Height over all 11¼ inches. Weight packed 108 lbs. per dozen. Packed 1 in carton.

No. 1621—Without Scoop.....Each, $7.00

Enterprise Meat Choppers

No. 5 Enterprise Meat Chopper
Small Family Size



Tinned cast iron one-piece cylinder, stand, and hopper; detachable cast iron crank, with hardwood handle; cast iron spiral feed screw Four-bladed inside knife revolving against removable perforated ground steel plate, with $\frac{3}{16}$-in. holes. All working parts carefully milled and interchangeable. Chops per minute 1½ lbs. Weight 4¾ lbs. 6 in a case.

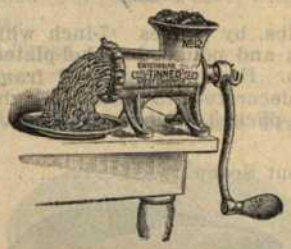
No. 5. . . . . Each 3.25

No. 10 Enterprise Meat Chopper
Large Family Size

Tinned cast iron one-piece cylinder, stand, and hopper; detachable cast iron crank, with hardwood handle; cast iron spiral feed screw. Four-bladed inside knife revolving against removable perforated ground steel plate, with $\frac{3}{16}$-in. holes. All working parts carefully milled and interchangeable. Chops per minute 3 lbs. Weight 9 lbs. 6 in a case.

No. 10. . . . . Each 5.50

No. 12 Enterprise Meat Chopper
Large Family Size



Tinned cast iron one-piece cylinder, stand, and hopper; detachable cast iron crank, with hardwood handle; cast iron spiral feed screw. Four-bladed inside knife revolving against removable perforated ground steel plate, with $\frac{3}{16}$-in. holes. All working parts carefully milled and interchangeable. Chops per minute 3 lbs. Weight 9 lbs. 6 in a case.

No. 12. . . . . Each 5.00

No. 22 Enterprise Meat Chopper
Butcher Size

Tinned cast iron one-piece cylinder, stand and hopper; detachable cast iron crank, with hardwood handle; cast iron spiral feed screw. Four-bladed inside knife revolving against removable perforated ground steel plate, with $\frac{3}{16}$-in. holes. All working parts carefully milled and interchangeable. No. 22 chops per minute 4 lbs. Weight 14 lbs. No. 32 chops per minute 5 lbs. Weight 22 lbs. 6 in a case.

No. 22—Small Butcher Size. . . . . Each, 8.75

No. 32—Large Butcher Size. . . . . Each, 10.50

Enterprise Food Choppers

No. 501 Enterprise Food Chopper
Small Family Size

Tinned cast iron one-piece cylinder, stand and hopper; detachable cast iron crank, with hardwood handle. All working parts carefully milled and interchangeable. Complete with four knives—fine, medium, coarse and nut butter cutter. Chops per minute 2 lbs. Weight 4 lbs. 12 in a case.

No. 501. . . . . Each, 2.00

No. 602 Enterprise Food Chopper
Medium Family Size

Tinned cast iron cylinder stand, hopper, crank and spiral feed screw; hardwood handle; all parts carefully milled and interchangeable. Complete with four knives—fine, medium, coarse and nut butter cutter. Chops per minute 2½ lbs. Weight 4½ lbs. 12 in a case.

No. 602. . . . . Each, 2.50

No. 703 Enterprise Food Chopper
Large Family Size

Tinned cast iron cylinder, stand, hopper, crank and spiral feed screw; hardwood handle; all working parts carefully milled and interchangeable. Complete with four knives—fine, medium, coarse and nut butter cutter. Chops per minute 3 lbs. Weight 8 lbs. 6 in a case.

No. 703. . . . . Each, 3.25

Universal Food Choppers

No. 0 Universal Food Chopper
Small Family Size

Cast iron one-piece frame, spiral feed screw, all finely tinned. Each chopper furnished complete as described below with specially machined cutters beveled to give a shear-like cutting edge.

Coarse, medium and fine cutters. Capacity 1½ lbs. per minute. Height above the table 4¾ inches. Packed 1 in box. Weight 3 lbs.

No. 0.....Each, 1.85

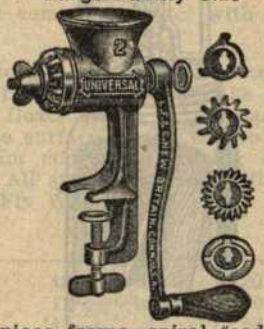
No. 1 Universal Food Chopper
Regular Family Size

Cast iron one-piece frame, spiral feed screw, all finely tinned. Each chopper furnished complete as described below with specially machined cutters beveled to give a shear-like cutting edge.

Coarse, medium and fine cutters and nut butter grinder. Capacity 2 lbs. per minute. Height above the table 5½ in. Packed 1 in a box. Weight 4¼ lbs.

No. 1.....Each, 2.25

No. 2 Universal Food Chopper
Large Family Size

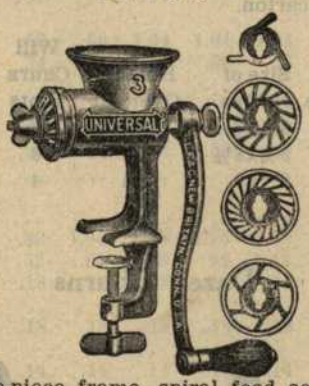


Cast iron one-piece frame, spiral feed screw, all finely tinned. Each chopper furnished complete as described below with specially machined cutters beveled to give a shear-like cutting edge.

Coarse, medium and fine cutters and nut butter grinder. Capacity 2½ lbs. per minute. Height above the table 6 inches. (Stuffing Attachments fit No. 2.) Packed 1 in a box Weight 4¾ lbs.

No. 2.....Each, 2.75

No. 3 Universal Food Chopper
Hotel Size



Cast iron one-piece frame, spiral feed screw, all finely tinned. Each chopper furnished complete as described below with specially machined cutters beveled to give a shear-like cutting edge.

Coarse, medium and fine cutters and nut butter grinder. Capacity 3 lbs. per minute. Height above the table 7 inches. (Stuffing Attachment fits No. 3.) Packed 1 in box. Weight 8 lbs.

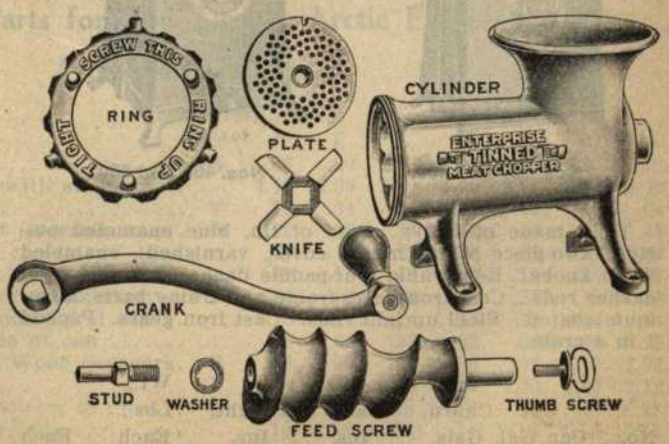
No. 3.....Each, 3.50

Enterprise Sausage Stuffer and Lard Press

Combined fruit and lard press and sausage stuffer. Beveled gear and screw movement; black japanned finish; iron cylinder bored true; perforated tin cylinder, lipped for removal from iron cylinder; perforated strainer plate and one each large and small plunger plate and nickel plated corrugated stuffer attachment. 1 in a case.

Nos.	25	31	35
Capacity, Quarts.	4	6	8
Diameter Cylinder, inches	6¼	8½	8½
Height, inches.	17	17⅜	19½
Weight Each, lbs	45	57	62
Each.	10.50	11.50	12.50

Repairs for Meat and Food Choppers



We can furnish repairs for Enterprise and Universal Meat and Food Choppers by shipping direct from factory. Orders must state definitely the part wanted and chopper for which it is intended.

Dazey Churns

Has a heavy, clear glass jar with beveled corners. Tinned, stamped steel threaded screw-cap top, with removable strainer. Cast iron gear frame, with hand grip, aluminum finish, riveted to top cap; cast gearing, accurately fitted; cast iron crank with natural finish hardwood handle. Hardwood propeller dash with four blades, smoothly grooved and nailed. Heavily tinned steel dasher rod. Packed 1 in a carton.

No.	Cap. Pints	Size of Jar Ins.	Height, Over All	Will Churn Pints	Wt. Lbs. Per Doz.	Per Doz.
20	4	4¾x8	12	2	75	$26.80
30	6	5¾x8½	13	3	106	$33.90
40	8	6 x9	14	4	120	$44.00

Dazey Churns

Nos. 200 and 300.

Nos. 400 and 600.

Tank made of heavy grade of tin, blue enameled outside; two-piece white maple cover, varnished; enameled wood knobs. Removable four-paddle dashers; tinned steel dasher rods. Cast iron base, frame and frame parts, aluminum coated. Steel upright rods. Cast iron gears. Packed 1 in a crate.

No.	Cap. Gal.	Will Churn, Gals.	Base, Ins.	Height, Ins.	Wt., Lbs., Each	Each
200	2	1	8	21	13	$ 5.70
300	3	1½	10	25	21	$ 7.30
400	4	2	11	27	25	$ 8.90
600	6	3	12	31	37	$11.20

Acme Freezers

The Acme Freezer is sanitary, light, durable, compact, easy turning, and saves space, ice, work and time. It has no heavy tub. Has no gears, wheels or other complicated parts to wear out or get out of order, therefore no parts to replace. Fits pantry shelf when not in use, and slips into ice chest or refrigerator after freezing. The new model Enameled Acme Freezer is very attractive and handsome with its artistic, vivid, deep blue design label.

The 2-quart size is tapered to nest, thus reducing the freight costs. This also permits the contents to be very easily removed when it is desirous to serve ice cream in solid forms and sliced to suit. The 2-quart size makes 6 to 8 dishes. the gallon size 12 to 16 dishes. 2-quart size packed ½ dozen to carton, nested. Weight 20 lbs. carton. 4-quart size packed ½ dozen to carton, not nested. Weight 30 lbs.

No. 22Q—2-quart . . . . . Each, $2.00
No. 44Q—4-quart . . . . . Each, $3.40

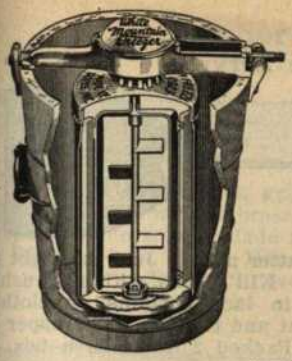
New Design Arctic Freezers

One Motion

Tub made of selected stock; Wire Hoops; Copper Steel Charcoal Tin Can; Iron Beater with Wood Scrapers. All parts that come in contact with the cream heavily tinned, others galvanized.

In operation the can revolves while the beater remains stationary. It is made of the best selected materials, and guaranteed to fully freeze a fine quality of ice cream in seven minutes or less. All sizes furnished with crank only.

No.	1	2	3	4	6	8	10
Capacity, quarts...	1	2	3	4	6	8	10
Weight each, lbs..	5	8	10	12	17	20	21
Each	4.00	4.60	5.55	6.80	8.60	11.10	14.80



New Design White Mountain Freezers

Three Motion

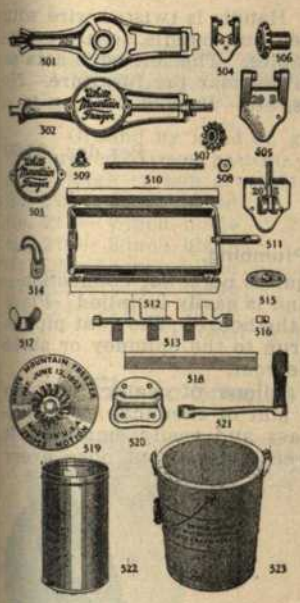
White Pine Tub, Galvanized Wire Hoops, Steel Can, Tin Plated; Malleable Iron Beater with Wood Scrapers. All parts that come in contact with the cream heavily tinned, others galvanized.

In operation the can moves from right to left, the outside beater moves from left to right, scrapes with its wooden bars the frozen cream from the can and throws it toward the center, where it is met by the floats of the inside beater moving in an opposite direction and returned to the inside surface of the can to be refrozen. The triple motion thus induced keeps the cream constantly moving and insures every particle being smoothly and evenly frozen. All sizes furnished with Crank only. We can also furnish 15 and 20-quart sizes with Fly Wheel.

	With Crank									With Fly Wheel	
No.	1	2	3	4	6	8	10	12	15	20	15	20
Capacity, quarts	1	2	3	4	6	8	10	12	15	20	15	20
Weight each, lbs.	5	9	11	13	18	22	24	41	47	59	72	91
Each	4.85	5.65	6.75	8.25	10.45	13.50	18.00	21.55	25.60	33.20	31.60	40.60

Repair Parts for New Design White Mountain Freezers

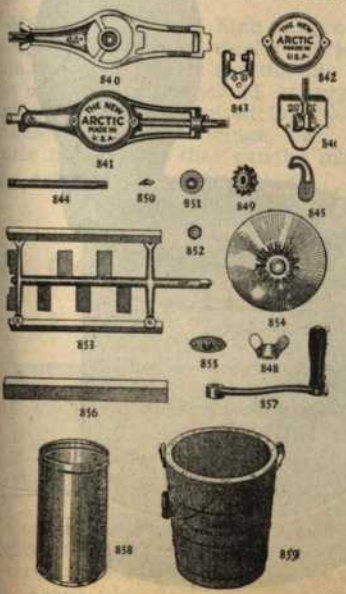
From Factory Only.



No.	Description	Pattern Letter	Quarts 1	2	3	4	6	8	10	12	15	20
501	Gear Case, blank	M	.60	1.05	1.15	1.30	2.20	2.50	2.80	4.75	5.10	5.30
502	Gear Case, complete	...	1.60	2.50	2.65	2.80	4.70	5.00	5.45	9.85	10.40	10.95
503	Cap for gear case	L	.18	.34	.34	.34	.68	.68	.68	1.05	1.05	1.18
504	Small Tub Ear	B	.22	.38	.38	.38	.48	.48	.48	...	...	...
505	Large Tub Ear	B	...	...	...	...	...	...	...	1.50	1.50	1.70
506	Upper Gear with square hole for dasher stem	D	.28	.50	.50	.50	1.04	1.04	1.04	1.70	1.70	2.20
507	Pinion Gear	T	.20	.34	.34	.34	.58	.58	.58	1.02	1.02	1.36
508	Small Nut on crank shaft	...	...	...	...	...	...	...	...	.14	.14	.14
509	Dasher Support inside of can	...	.18	.22	.22	.22	.28	.28	.28	...	...	...
510	Driving Shaft	...	.20	.22	.28	.34	.50	.56	.64	1.02	1.10	1.22
511	Large Tub Latch	K	...	...	...	...	...	...	...	1.20	1.20	1.30
511½	Special Bolt only, for large tub latch	...	...	...	...	...	...	...	...	.40	.40	.40
512	Outer Mixer	H	.52	.70	.88	1.06	1.48	1.76	2.30	2.65	2.82	3.70
513	Inner Mixer	F	.36	.42	.52	.64	.78	.98	1.42	1.94	2.12	2.46
514	Small Tub Hook	...	.14	.18	.18	.18	.18	.18	.18	...	...	...
515	Iron Centerpiece in bottom of tub	U	.14	.18	.18	.18	.18	.18	.18	.30	.30	.36
516	Can Lug soldered to inside at top of can	...	.10	.14	.14	.14	.14	.14	.14	.18	.18	.22
517	Wing Nut for latch bolt	...	...	...	...	...	...	...	...	.22	.22	.22
518	Wooden Scraper Bar	...	.10	.14	.14	.14	.18	.18	.18	.28	.28	.42
519	Lid or Can Cover, Iron, as used in freezer	X	.60	.75	.80	1.00	1.10	1.40	2.12	3.28	3.36	3.58
519½	Lid or Can Cover, Tin, as used for packing	...	.60	.75	.80	1.00	1.10	1.40	1.50	1.80	2.20	2.50
520	Drop Handle	...	...	...	...	...	...	...	.50	.50	.50	.65
521	Crank	...	.34	.50	.65	.65	.84	.84	.84	1.72	1.72	1.98
522	Can, less lid	...	.72	1.18	1.32	1.60	2.26	2.80	3.98	5.72	6.26	7.76
523	Tub with fittings	...	1.24	1.94	2.30	2.74	3.24	4.02	5.70	6.42	7.44	9.30
524	Can Bottom, Cast Iron	W	...	...	...	...	...	...	...	2.50	2.70	2.96

Repair Parts for New Design Arctic Freezers

From Factory Only.



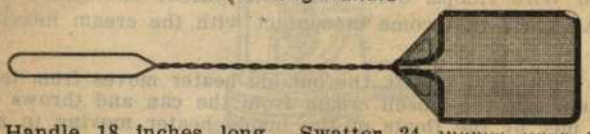
No.	Description	Pattern Letter	Quarts 1	2	3	4	6	8	10
840	Gear Case, blank	A	.60	.80	.95	1.10	1.50	1.60	2.30
841	Gear Case, complete with all parts	...	1.15	1.30	1.50	1.60	2.05	2.35	3.00
842	Cap for gear case	V	.18	.34	.34	.34	.68	.68	.68
843	Tub Ear on side next to crank	B	.22	.38	.38	.38	.48	.48	.48
844	Driving Shaft	...	.20	.22	.28	.34	.50	.56	.64
845	Small Tub Hook	...	.14	.18	.18	.18	.18	.18	.18
849	Pinion Gear at end of crank shaft	T	.20	.34	.34	.34	.58	.58	.58
850	Can Lug soldered inside top of can	...	.10	.14	.14	.14	.14	.14	.14
851	Dasher Support inside of can	...	.18	.22	.22	.22	.28	.28	.28
853	Mixer complete with Wood Scrapers	R	.32	.50	.68	.86	.96	1.10	1.58
854	Lid or Can Cover	Y	.60	.75	.80	1.00	1.10	1.40	2.12
855	Iron Centerpiece in bottom of tub	U	.14	.18	.18	.18	.18	.18	.18
856	Wooden Scraper Bar	...	.10	.14	.14	.14	.18	.18	.18
857	Crank	...	.34	.50	.65	.65	.84	.84	.84
858	Can, less lid	...	.72	1.18	1.32	1.60	2.26	2.80	3.98
859	Tub with fittings	...	1.24	1.94	2.30	2.74	3.24	4.02	5.70

Freezer Cans, less lids, will be furnished on all orders not otherwise specified.

Fly Swatters

Shurhit

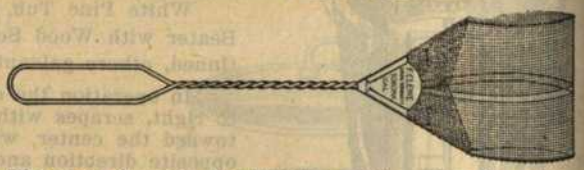
Extra Long Handle



Handle 18 inches long. Swatter 24 inches over all. Handle is made of heavy spring wire with loop handhold. High grade screen is bound with felt which acts as a bumper on both sides. Especially designed for long distance swatting on ceilings, etc. No rough edges to scratch polished surfaces. Packed 2 dozen in a box, 2½ gross in a carton.

Shurhit Swatters.....Per doz., $1.40

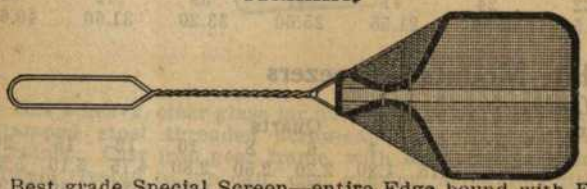
Double Service



The most durable Fly Swatter made. Just the right size and shape for effective use. Kill the fly without crushing. No cut selvage to catch in lace curtains or clothing. Twisted Wire Handle is light and flexible. The upper end of handle is all enclosed. Packed 2 dozen in a box, 2½ gross in a carton.

Double Service Swatters.....Per doz., $1.70

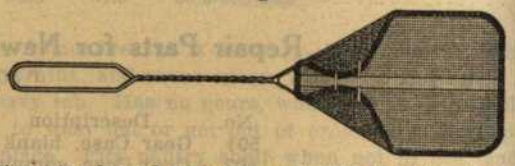
Hummer



Best grade Special Screen—entire Edge bound with Felt. Handle is Twisted Wire with loop that fits the hand. Screen and handle securely connected with three stiff wire staples. The felt edge acts as a bumper on both sides. Does not mar the furniture. No loose ends to catch in curtains, etc. Its neat appearance makes every housewife want it. Packed 2 dozen in a box, 2½ gross in a carton.

Hummer Swatters.....Per doz., $1.40

Tiger



Entire edge bound with felt. Handle is twisted wire with loop that fits the hand. Screen and handle securely connected with three stiff wire staples. The felt edge acts as a bumper on both sides. Does not mar the furniture. No loose ends to catch in curtains, etc. Packed 2 dozen in a box, 5 gross in a carton.

Tiger Swatters.....Per doz., $1.00

Chemical Closet

Requires no Plumbing.

The Winner Sanitary Closet requires no sewer connection—no running water—no plumbing, and is easily installed. Place it in the most convenient place in the house. The vent pipe is then connected to the closet and run to the chimney or stove pipe, or it can be run through the roof.

It is operated by pouring 2 gallons of water into the receptacle, to which is added 1/3 pint of chemical. The contents will be a sterile, liquid mass and easily emptied. It is only necessary to empty the receptacle about once every two weeks.

The outer case is made of heavy sheet metal, highly finished in gray enamel with striping. Oak seat and cover, varnished to a high glossy finish.

The inner receptacle is made of galvanized steel, and has a capacity of eight gallons. It is provided with a bail for carrying.

Closet is provided with large air passages, insuring complete ventilation.

Closet is 17½ inches high and 15¼ inches in diameter. Shipping weight 30 pounds.

Complete outfit consists of: Sheet Metal Closet Cabinet, Galvanized Steel Receptacle (capacity 8 gallons), Oak Seat and cover highly finished, 6½ ft. 3-in. Enameled Pipe, 2 Enameled Elbows, ½ gallon Chemical, Wall Finish Collar, Toilet Paper and Holder, Chimney Thimble, complete instructions for installing.

The Chemical for Sanitary Closets is a powerful germicide and has been developed by carefully experimenting with various ingredients until the best results have been accomplished. It is of non-corrosive qualities and the receptacle in which this chemical is used will last longer than with many chemicals on the market. Inert ingredient—Water not more than 8 per cent.

One cupful of Chemical, added to 2 gallons of cold water in the receptacle, is all that is necessary for one charging. This should be stirred thoroughly until mixed.

This Chemical can also be used as a Disinfectant by mixing two parts with one hundred parts water. A strong Disinfectant can be made and used in a sprayer or applied any way in places like public buildings, hospitals, schools, railway stations, barns, etc.

Chemical Closet.....Each, $14.00

Extra Chemical for above.....Per gal., $ 3.40

Butcher Knives

Ground by hand on grindstones under water. Beech handle with 3 brass rivets. 6-inch only. High carbon crucible steel. Blade not swaged.

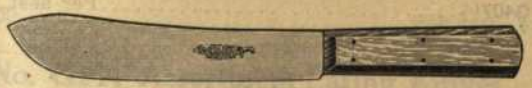
No. B2436—6-inch, Beech Handle.....Per doz., $4.40

Packed 1 dozen in a box.

Ground by hand on grindstones under water. Cocobolo handles with brass rivets and burrs. High carbon crucible steel. Blades swaged.

No. 476S—6-inch blade.....Per doz., $ 7.40
No. 477S—7-inch blade.....Per doz., $ 8.90
No. 478S—8-inch blade.....Per doz., $10.80

Packed ½ dozen in a box.

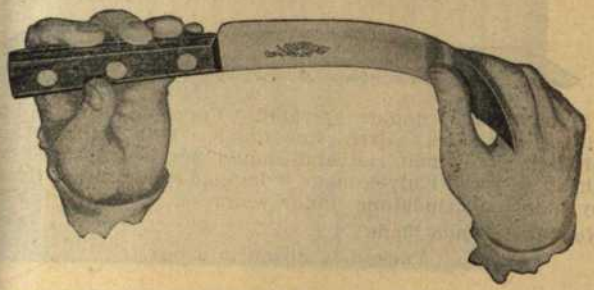


Ground by hand on grindstones under water. Improved Wilson pattern. Beech handles, with six steel pins. High carbon crucible steel. Blades not swaged.

No. 216— 6-inch blade.....Per doz., $ 5.10
No. 217— 7-inch blade.....Per doz., $ 6.70
No. 218— 8-inch blade.....Per doz., $ 8.30
No. 220—10-inch blade.....Per doz., $11.60
No. 222—12-inch blade.....Per doz., $16.20
No. 224—14-inch blade.....Per doz., $20.80

Packed ½ dozen in a box.

Elastic Special Household Knife



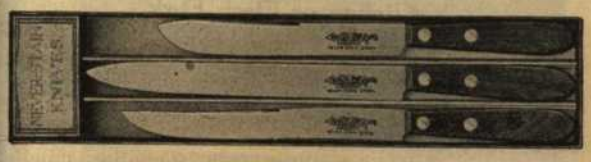
Made from special high carbon crucible steel, especially tempered for its particular purpose and hand ground so thin as to produce a spatula-like elastic blade of remarkable utility as a household, bakery, butcher or delicatessen knife. Unequaled for slicing meats, hot or cold, delicate cakes with tender icings, etc In every particular this knife is the best that can be made.

No. 4478—8-inch elastic blade.....Per doz., $12.50

Packed ½ dozen in a box.

No. G4500 Never-Stain Assortment—Slicers and Butcher Knives

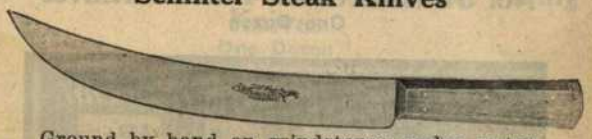
One-Half Dozen



Contains two each 8 and 9-inch Slicers and 7-inch butcher Knives with stainless steel blades. Cocobolo handles, brass rivets and burrs. Packed in an attractive display box.

No. G4500.....Per asst., $8.60

Scimiter Steak Knives



Ground by hand on grindstones under water. Beech handle with six steel rivets. High carbon crucible steel.

No. 228— 8-inch blade.....Per doz., $11.10
No. 230—10-inch blade.....Per doz., $14.80
No. 232—12-inch blade.....Per doz., $20.60
No. 234—14-inch blade.....Per doz., $26.40

Packed ½ dozen in a box.

No. 7 Assortment Butcher Knives

One Dozen

This assortment consists of two each of six Knives with fancy assorted handles of cocobolo, ebony, walnut and aluminum on extra finish blades made from "The Burritt High Carbon Crucible Steel," the highest grade cutlery steel obtainable. Ground on grindstone (not on emery wheels) to a true, keen, lasting edge. No knife in this assortment is found in regular stock; each has a special feature. Read the individual descriptions, left to right: No. 1387, 7-inch, stiff heavy back, ground to a keen cutting edge. An excellent knife.

No. 677S, 7-inch swaged blade, extra finish, walnut handle, encircled by two solid steel bands, electric welded and fitted into the tang of the knife so that the handle cannot possibly come loose.

No. 896S, 6-inch heavy extra finish swaged blade, one-piece genuine cocobolo handle, shaped to fit the hand, three brass rivets and burrs.

No. 576S, 6-inch swaged blade, extra finish, bolstered ebony handle, brass rivets and burrs.

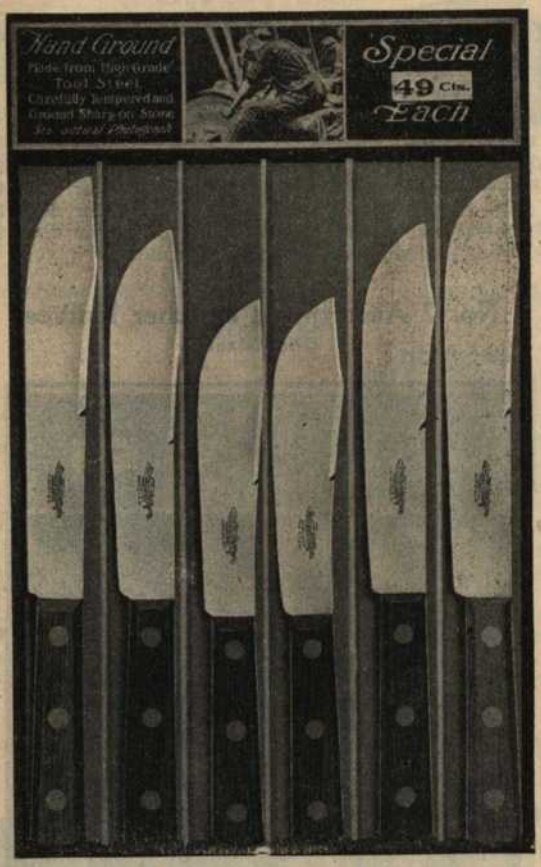
No. 3577S, 7-inch swaged blade, extra finish, attractive pure sheet aluminum handle cork lined, absolutely sanitary.

No. 4477, 7-inch Elastic Special Household Knife. Especially tempered for its particular purpose and hand ground so thin as to produce a spatula-like elastic blade of remarkable utility. Unequaled for slicing meats hot or cold, delicate cakes with tender icings, etc. Being ground thin, it holds an edge better than any other knife. Genuine cocobolo handle. Brass rivets and burrs.

No. 7.....Per asst., $11.50

No. 51 Assortment Butcher Knives

One Dozen



Made of high grade crucible steel carefully tempered and ground on a grindstone to a keen edge. 6-inch size has Cocobolo handle; 7-inch size has Walnut handle and 8-inch size has Beech handle.

No. 51 assortment contains 4 each 6, 7 and 8-inch sizes as listed above packed in an attractive display, a total of one dozen knives.

No. 51 Assortment.....Per asst., $7.00

Skinning Knives

Ground by hand on grindstones under water. Swell handle with six pins. Beech handle, 6-inch blade.

No. 2296.....Per doz., $6.50

Packed ½ dozen in a box.

Boning Knives

Ground by hand on grindstones under water. Beech handle with six steel pins; 6-inch blade.

No. 226.....Per doz., $5.30

Packed ½ dozen in a box.

Sticking Knives

Ground by hand on grindstones under water. Swell handles with six pins. Beech handle. 6-inch blade.

No. 206.....Per doz., $5.60

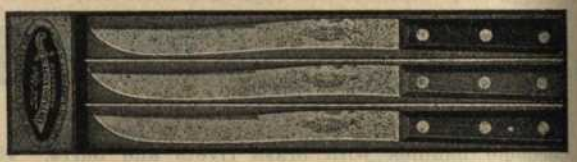
Packed ½ dozen in a box.

Slicing Knives

9-inch blade, swaged and fluted. Cocobolo handle, brass rivets and burrs. Ground by hand on grindstone under water to a keen edge. Extra fine finish.

No. 169SF.....Per doz., $10.25

Packed ½ dozen in a box.



7½-inch blades. Made of high quality cutlery steel, oil tempered. Hand ground on grindstones to a keen edge. Securely attached by brass rivets and burrs. Packed in attractive display containing 2 each Boxwood, Cocobolo and Ebony handles, a total of six knives.

No. G407½.....Per asst., $4.50

Bread Knives

Made of high grade cutlery steel, etched, and with serrular edge, 8½-inch blade. Round rubberoid handle and nickel ferrule.

No. 64.....Per doz., $5.30

Packed 1 dozen in a box.

9-inch blade, double serrated. Cocobolo handle, brass rivets and burrs. Extra fine finish. This Knife is made of high grade material and should not be confused with cheap serrated Knives made from cold-rolled steel. Ground by hand on grindstone under water.

No. 5429—9-inch blade.....Per doz., $11.50

Packed ½ dozen in a box.

Spatulas and Palette Knives

Blade made of special high carbon steel, ground flexible, oil tempered. Cocobolo handle, brass rivets and burrs. The best and most attractive Spatula on the market.

No. 407—7-inch blade.....Per doz., $7.40

Packed ½ dozen in a box.

Kitchen or Flesh Fork

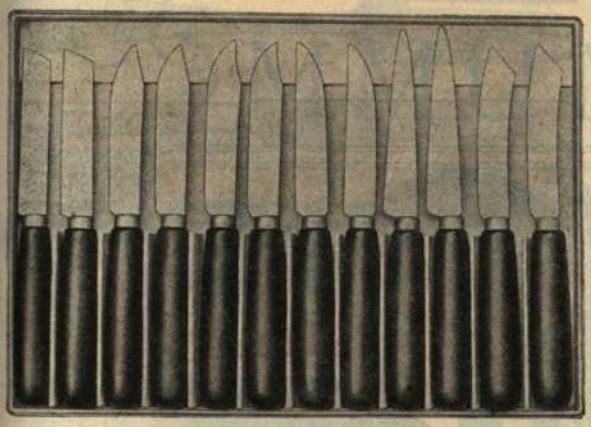
Cocobolo handle, brass rivets and burrs. Handle 7 inches long. Entire length of fork, including handle, is 12¾ inches. Highly tempered.

No. 480.....Per doz., $7.20

Packed ½ dozen in a box.

No. 1400 Assortment Paring Knives

One Dozen

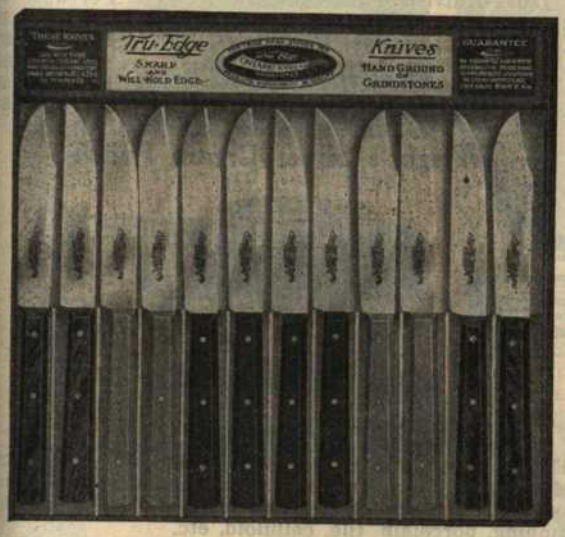


Made of high grade steel and tempered in oil. Blades 3¼ inches long. Ground by hand on grindstones, to a sharp edge. Round tumbled finish handles. Furnished in the shapes shown, a total of one dozen assorted in a display box.

No. 1400.....Per asst., $1.70

No. G111 Assortment Paring Knives

One Dozen



Made of extra quality cutlery steel, oil tempered, and hand ground on grindstones to a keen edge. Blades are 3¼ inches long and are etched. Assortment contains 2 shapes of blades and assorted Boxwood, Cocobolo and Ebony handles well riveted, a total of one dozen knives, in an attractive display box.

No. G111.....Per asst., $3.60

No. G2884 Assortment Never-Stain Paring Knives

One Dozen

Contains 12 Knives with 3-inch stainless steel blades. Driven tang riveted to flat rubberoid handles, riveted, imprinted "Never-Stain." In an attractive display box.

No. G2884.....Per asst., $4.30

No. W2865 Assortment Never-Stain Grape Fruit Knives

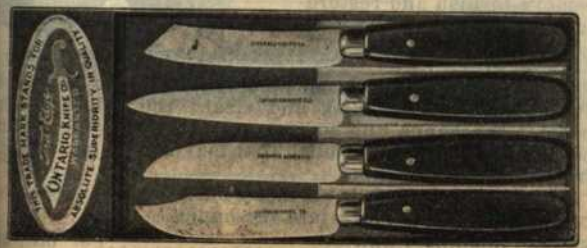
One-Half Dozen

Contains six 3½-inch double edge stainless steel blades, riveted to flat rubberoid handle. Handle imprinted "Never-Stain." In an attractive display box.

No. W2865.....Per asst., $6.75

No. G2813 Assortment Paring Knives

One Dozen



Made of high grade steel and tempered in oil. Ground by hand on grindstones to a sharp edge. Flat rubberoid handles riveted. Blades 3¼ inches long. Assortment contains 3 each of four different shapes of blades, a total of one dozen knives, in an attractive display box.

No. G2813.....Per asst., $2.40

No. 802 Assortment Never-Stain Paring Knives

One Dozen

Contains two each of four different shape stainless steel blades with cocobolo handles, brass rivets and burrs, and four with sanitary aluminum handles, a total of one dozen, in an attractive artistically colored display box.

No. 802 Assortment.....Per asst., $6.50

Putty Knives

Oval beech handle, one brass rivet and burr, and two brass pins. Blade 3½ inches long, 1¼ inches wide. Furnished in both stiff and elastic blades.

No. 20S—Stiff.....Per doz., $4.10
No. 20E—Elastic.....Per doz., $4.30

Packed 1 dozen in a box.

Oval, Cocobolo handle, 3 brass rivets and burrs. Heavy blade, 3½ inches long, 1½ inches wide. Furnished in both stiff and elastic blades.

No. 19S—Stiff.....Per doz., $6.75
No. 19E—Elastic.....Per doz., $7.20

Packed 1 dozen in a box.

Tempered cutlery steel blade, 1¼ inches wide, 3½ inches long, red stained handle, brass capped ferrule.

No. 135—Putty Knife.....Per doz., $1.90

Packed 1 dozen in a box.

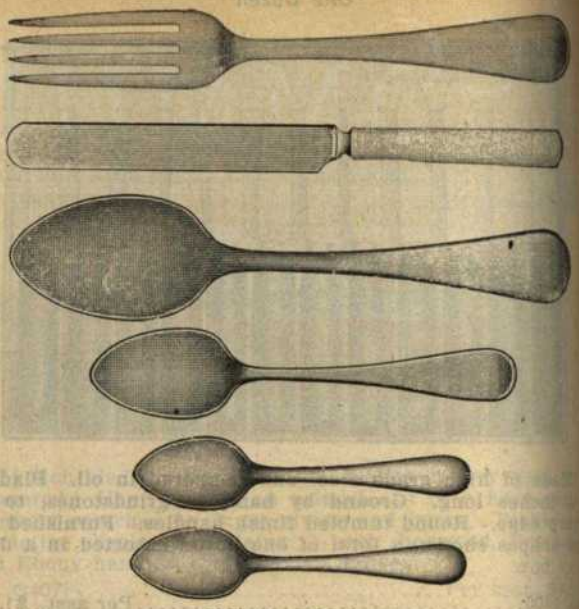
No. 125 Paint Scraper

For removing old paint and wall scraping, also used extensively by bakers for cleaning pans, etc., and by candy makers. Fitted with rustproof screws. Blade made of roll tempered steel. Beech handle, natural finish. Made in three widths of blade.

No. 125A—3 -inch.....Per doz., $2.40
No. 125B—3½-inch.....Per doz., $2.50
No. 125C—4 -inch.....Per doz., $2.60

Packed ½ dozen in a box.

Nickel Silver Tableware



Windsor Pattern.

White metal throughout, highly polished, will not rust. Knives and Forks packed one set of 6 each in a box. Spoons 1 dozen in a box.

No. 7301—Knives.....Per doz., $6.00
No. 7302—Forks.....Per doz., $3.80
No. 7303—Tablespoons.....Per doz., $3.80
No. 7304—Dessert Spoons.....Per doz., $3.50
No. 7305—Teaspoons.....Per doz., $2.00
No. 7306—Teaspoons, light weight.....Per doz., $1.80

Wright's Silver Cream Polish

Especially adapted to cleaning Silverware but will clean and polish almost everything where tarnish, dirt and grime accumulate. Excellent for nickel work on automobiles, plumbing, porcelain, tile, celluloid, etc.

8-oz. glass jars.....Per doz. $4.50
16-oz. glass jars.....Per doz. $7.20

Packed 1 dozen in a box.

Shino Polishing Cloth

Shino Polishing Cloth is prepared so that it may be used on the finest polished and finished jewelry, table silverware, plated ware, etc.

The prepared cloth will remove tarnish and restore luster to the badly tarnished finish.

Shino Polishing Cloth consists of two cloths. The Red cloth is Prepared cloth to polish and clean; the White Cloth is to protect the hands and to be used to put on the finishing polish and remove any polish that may be left on the article from the prepared cloth.

The Prepared Cloth is perfectly harmless, will not scratch or mar the surface, or injure the hands.

Shino Polishing Cloth.....Per doz. $6.00

Packed 1 in a box.

COMMUNITY PLATE

BABY SPOON (Bent Handle)

SUGAR SPOON

COLD MEAT OR SERVING FORK
SMALL COLD MEAT OR SARDINE FORK

ICED TEA OR ICED DRINK SPOONS

JELLY SERVER

PIERCED ROUND SERVER

INDIVIDUAL BUTTER SPREADERS

INDIVIDUAL SALAD FORKS

PICKLE OR OLIVE FORK

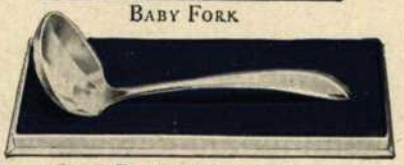
SMALL STEAK OR GAME SET (H. H.)
SMALL STEAK OR GAME SET (Mod. H.)

BOUILLON OR CONSOMME SPOONS

BUTTER KNIFE

KNIFE AND FORK SET

BABY FORK



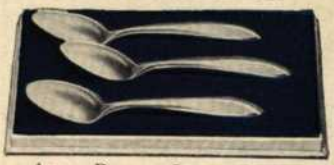
SALAD DRESSING OR SMALL LADLE
SERVING OR GRAVY LADLE

LARGE BERRY OR SERVING SPOON
SMALL BERRY OR PRESERVE SPOON

OYSTER OR SEAFOOD FORKS

CHILD'S SET (Fork, Spoon and H. H. Knife)
CHILD'S SET (Fork, Spoon and Flat Knife)

PIERCED PASTRY SERVER



AFTER DINNER COFFEE SPOONS
5 O'CLOCK TEA OR SHERBET SPOONS

ORANGE OR GRAPE FRUIT SPOONS

OLIVE OR SALTED NUT SPOON

PATRICIAN and SHERATON Patterns shipped direct from factory.

COMMUNITY PLATE

THE 26-PIECE CHEST-TRAY

Free, with Each Silverware Set

THIS new Chest-Tray—furnished free with each 26-pc. set of COMMUNITY PLATE—is both beautiful and practical. The lid is readily detachable. Thus the Chest becomes a most useful Tray—for store purposes and in the home. Slips easily into the sideboard drawer.

A beautiful, distinctive setting for the Silverware. With cover—*a Chest;* With cover removed—*a Tray.*

Contents

6 Teaspoons
6 Table Spoons
6 Dinner Knives
6 Dinner Forks
1 Butter Knife
1 Sugar Spoon

Bird of Paradise	*Grosvenor*	*Adam*	*Patrician*	*Sheraton*	*Stainless Knives Have the Call. Why not specify "Stainless De Luxe?"* **CHEST TRAYS** (26 PIECES)	DEALERS' PRICES SUBJECT TO REGULAR TRADE DISCOUNT	PRICES TO CONSUMERS,
					KNIVES WITH PLATED BLADES	Each	Each
12584	11584	10584	6584	9584	Hollow Handle Dinner Knives and Flat Dinner Forks	$39.12	$30.50
12580	11580	10580	6580	9580	Hollow Handle Dessert Knives and Flat Dessert Forks	38.56	30.00
12585	11585	10585	6585	9585	Modeled Handle Dinner Knives and Flat Dinner Forks	34.62	27.25
12581	11581	10581	6581	9581	Modeled Handle Dessert Knives and Flat Dessert Forks	34.16	26.75
					KNIVES WITH STAINLESS BLADES		
12579	11579	10579	6579	9579	Hollow Handle Dinner Knives and Flat Dinner Forks	40.36	31.50
12553	11553	10553	6553	9553	Hollow Handle DeLuxe Dinner Knives and Flat Dinner Forks	42.00	32.50
12487	11487	10487	6487	9487	Hollow Handle Dessert Knives and Flat Dessert Forks	39.68	31.00
12577	11577	10577	6577	9577	Modeled Handle Dinner Knives and Flat Dinner Forks	35.92	28.00
					26-PIECE CHESTS		
150	150	150	150	150	Seal Grain Leatherette Flat—Empty	$12.50	$ 7.75
12983	11983	10983	6983	9983	With H. H. Dinner Knives	51.60	38.00
12984	11984	10984	6984	9984	With Modeled Handle Dinner Knives	47.10	35.00
130	130	130	130	130	Heavy Mahogany, Flat—Empty	19.60	12.50
12994	11994	10994	6994	9994	With H. H. Dinner Knives	58.70	43.00
12995	11995	10995	6995	9995	With Modeled Handle Dinner Knives	54.20	40.00
148	148	148	148	148	Genuine Mahogany, with Drawer—Empty	20.00	12.50
12848	11848	10848	6848	9848	With H. H. Dinner Knives	59.10	43.00
12947	11947	10947	6947	9947	With Modeled Handle Dinner Knives	54.60	40.00

Add-a-Piece Cabinets For Combinations from 36 to 300 Pieces with Hollow Handle Knives	DEALER'S PRICES SUBJECT TO REGULAR TRADE DISCOUNT	PRICES TO CONSUMERS
36 to 60 Piece Cabinet (with 45 pieces)	$105.20	$77.00
55 to 90 Piece Cabinet (with 72 pieces)	167.50	120.00
100 to 200 Piece Cabinet (with 140 pieces)	378.00	240.00
200 to 300 piece Cabinet (with 255 pieces)	520.00	390.00

NOTE—If Stainless Blade Knives are desired in any Cabinet add the difference in cost between Plated and Stainless Blade Knives listed on Page 1.

PATRICIAN and SHERATON Patterns shipped direct from factory.

Twenty Year Replacement Guarantee

TUDOR PLATE

By the Makers of Community Plate

DUCHESS DESIGN | QUEEN BESS DESIGN | BARONET DESIGN

Queen Bess	Baronet	Duchess	20 Year Replacement Guarantee	Dealers' Prices Subject to Regular Trade Discount	Prices to Consumers
			SPOONS—12 in Box	Per Doz.	Set of Six
29602	39602	36602	Tea	$4.00	$1.60
29603	39603	36603	Dessert	7.48	3.00
29605	39605	36605	Table	8.00	3.20
29604	39604	36604	Soup (Round Bowl)	8.00	3.20
			FORKS—12 in Box		
29607	39607	36607	Dinner or Medium	8.00	3.20
29606	39606	36606	Dessert	7.48	3.00
			KNIVES (Plated Blades)—Six in Gift Box		
29611	39611	36611	H. H. Dinner or Medium	22.80	8.50
29612	39612	36612	Hollow Handle Dessert	21.56	8.00
29615	39615	36615	Embossed Handle Dinner or Medium	9.00	3.50
29616	39616	36616	Embossed Handle Dessert	8.76	3.40
29698	39698	36698	Embossed Handle Fruit	9.08	3.50
			KNIVES (Stainless Blades)—Six in Gift Box		
29664	39664	36664	H. H. Dinner or Medium	25.36	9.50
29626	29626	36626	Hollow Handle Dessert	24.00	9.00
29594	39594	36594	Embossed Handle Dinner or Medium	17.68	6.50
			CORRECT SERVICE PIECES		
29650	39650	36650	Sugar Spoon...1 in blue lined gift box	11.28	.75 each
29695	39695	36695	Butter Knife...1 in blue lined gift box	11.28	.75 each
29729	39729	36729	Butter and Sugar Set...Set in blue lined gift box	22.56	1.50 set

Twenty Year Replacement Guarantee

TUDOR PLATE

By the Makers of Community Plate

CORRECT SERVICE PIECES
KNIFE & FORK SETS

DESIRABLE gift items in Silverware are quick to move – especially those of *known value* and *moderately priced*. The Tudor Plate pieces here listed are all particularly suited to this purpose and the range in prices is sufficient to meet widely varying demands.

Tudor Plate makes ideal gifts for all occasions – Weddings, Birthdays, Anniversaries – twelve months in the year.

Queen Bess	*Baronet*	*Duchess*	CORRECT SERVICE PIECES *All Pieces Listed on this Page are Packed in Blue Lined Gift Boxes*	DEALER'S PRICES SUBJECT TO REGULAR TRADE DISCOUNT	PRICES TO CONSUMERS
			SPOONS	Per Doz.	
29625	39625	36625	*Coffee ... 6 in box	$5.00	$2.00 set
29601	39601	36601	*5 O'Clock Tea or Sherbet ... 6 in box	5.00	2.00 set
29622	39622	36622	*Bouillon or Consomme ... 6 in box	8.76	3.50 set
29629	39629	36629	*Iced Tea or Iced Drink ... 6 in box	8.12	3.25 set
29657	39657	36657	*Ice Cream or Sundae ... 6 in box	7.52	3.00 set
29641	39641	36641	*Orange or Grapefruit ... 6 in box	7.52	3.00 set
29620	39620	36620	*Berry or Serving ... 1 in box	30.00	2.00 each
29619	39619	36619	*Baby (Bent Handle) ... 1 in box	9.84	.65 each
29624	39624	36624	Baby (Straight) ... 1 in box	9.84	.65 each
29483	39483	36483	Jam or Conserve ... 1 in box	11.28	.75 each
			ICERS		
29667	39667	36667	*Cold Meat or Serving ... 1 in box	18.72	1.25 each
29668	39668	36668	*Small Cold Meat Fork ... 1 in box	15.12	1.00 each
29679	39679	36679	*Oyster or Seafood ... 6 in box	8.12	3.25 set
29646	39646	36646	*Pickle or Olive ... 1 in box	15.12	1.00 each
29688	39688	36688	*Individual Salad or Pastry ... 6 in box	11.88	4.75 set
29628	39628	36628	Baby (Straight) ... 1 in box	9.84	.65 each
			KNIVES (PLATED BLADES)		
29697	39697	36697	*Individual Butter Spreaders ... 6 in box	10.64	4.25 set
			KNIFE AND FORK SETS		
			6 KNIVES AND 6 FORKS IN BLUE LINED BOX	Per Set	
29742	39742	36742	Hollow Handle Dinner Knives and Flat Dinner Forks	15.40	11.75 set
29743	39743	36743	Hollow Handle Dessert Knives and Flat Dessert Forks	14.52	11.00 set
29803	39803	36803	Embossed Handle Dinner Knives and Flat Dinner Forks	8.50	6.75 set
29804	39804	36804	Embossed Handle Dessert Knives and Flat Dessert Forks	8.12	6.40 set
			WITH STAINLESS BLADE KNIVES		
29598	39598	36598	Hollow Handle Dinner Knives and Flat Dinner Forks	16.68	12.75 set
29599	39599	36599	Hollow Handle Dessert Knives and Flat Dessert Forks	15.74	12.00 set
29597	39597	36597	Embossed Handle Dinner Knives and Flat Dinner Forks	12.84	9.75 set
			LADLES	Per Doz.	
29715	39715	36715	*Salad Dressing or Small ... 1 in box	15.12	1.00 each
29717	39717	36717	*Serving or Gravy ... 1 in box	22.56	1.50 each
29721	39721	36721	Medium Soup or Serving ... 1 in box	60.00	4.00 each
			CARVERS	Per Set	
29728	39728	36728	*2-Piece Steak or Game H. H. (Stainless Blades) ... Set in box	8.00	6.00 set
			MISCELLANEOUS	Per Doz.	
29708	39708	36708	Sugar Tongs ... 1 in box	15.12	1.00 each
29623	39623	36623	Jelly Server ... 1 in box	15.12	1.00 each
29690	39690	36690	*Pierced Round Server ... 1 in box	30.00	2.00 each
			SETS	Per Set	
29737	39737	36737	*Child's (Spoon, Fork and Flat Knife) ... Set in box	2.50	2.00 set
29738	39738	36738	Baby (Bent Spoon and Straight Fork) ... Set in box	1.64	1.30 set
29566	39566	36566	Baby (Straight Spoon and Straight Fork) ... Set in box	1.64	1.30 set
			STANDARD 26 PIECE CHEST	Each	Each
465B	465B	465B	Oak Finish with Drawer, Empty	2.50	1.75
29860	39860	36860	with Embossed Handle Dinner Knives and Flat Dinner Forks	18.88	14.75
29896	39896	36896	with Embossed Handle Dessert Knives and Flat Dessert Forks	18.50	14.50
29859	39859	36859	with Hollow Handle Dinner Knives and Flat Dinner Forks	25.78	20.00
464B	464B	464B	Mahogany Finish with Drawer, Empty	2.50	1.75
29930	39930	36930	with Embossed Handle Dinner Knives and Flat Dinner Forks	18.88	14.75
29494	39494	36494	with Embossed Handle Dessert Knives and Flat Dessert Forks	18.50	14.50
29928	39928	36928	with Hollow Handle Dinner Knives and Flat Dinner Forks	25.78	20.00

* Illustrated on opposite page. The *Queen Bess* and *Duchess* designs are furnished in Bright Butler finish; the *Baronet* in Bright or Grey

NOTE—If Stainless Blade Knives are desired in any Chest combination, add the difference in cost between Plated and Stainless Blades listed on preceding page.

Twenty Year Replacement Guarantee

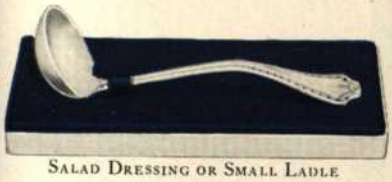
TUDOR PLATE

By the Makers of Community Plate

LARGE BERRY OR SERVING SPOON

ICED TEA OR ICED DRINK SPOONS

ORANGE OR GRAPE FRUIT SPOONS

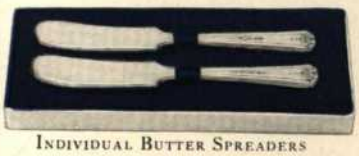


SALAD DRESSING OR SMALL LADLE

SERVING OR GRAVY LADLE

5 O'CLOCK TEA OR SHERBET SPOONS

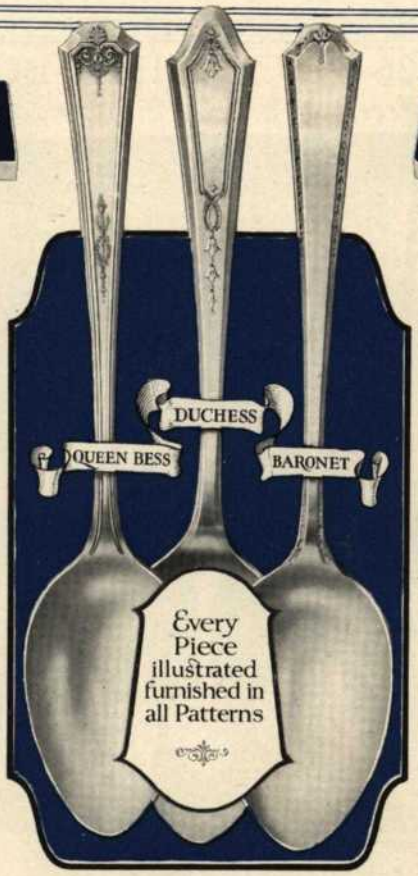
AFTER DINNER COFFEE SPOONS



INDIVIDUAL BUTTER SPREADERS

ICE CREAM OR SUNDAE SPOONS

PICKLE OR OLIVE FORK



CHILD'S SET (Fork, Spoon and Flat Knife)

SMALL STEAK OR GAME SET (H. H.)

KNIFE AND FORK SET

COLD MEAT OR SERVING FORK

SMALL COLD MEAT OR SARDINE FORK

PIERCED ROUND SERVER

SUGAR SPOON

BUTTER KNIFE

OYSTER OR SEAFOOD FORKS

INDIVIDUAL SALAD FORKS

BOUILLON OR CONSOMME SPOONS

BABY SPOON (Bent Handle)

Twenty Year Replacement Guarantee

TUDOR PLATE

By the Makers of Community Plate

THE 26-PIECE CHEST-BUFFET

—*Free,* with Each Silverware Set

THIS Chest-Buffet and the beautiful new 43- and 56-piece Chests shown enable the dealer to meet the desires of the Bride–the large or small family or those who entertain. These sets have been most carefully chosen to fit differing home requirements. The Chest-Buffet and the Chests are free; you pay only the regular price of the Silverware.

Ideal *for* Store and Window *Display*

Contents

6 Teaspoons
6 Table Spoons
6 Dinner Knives
6 Dinner Forks
1 Butter Knife
1 Sugar Spoon

Queen Bess	*Baronet*	*Duchess*		Dealers' Prices Subject to Regular Trade Discount	Prices to Consumers,
			(With Plated Blades)	Each	Each
29584	39584	36584	Hollow Handle Dinner Knives and Flat Dinner Forks	$23.28	$18.00
29580	39580	36580	Hollow Handle Dessert Knives and Flat Dessert Forks	22.40	17.25
29585	39585	36585	Embossed Handle Dinner Knives and Flat Dinner Forks	16.38	13.00
29581	39581	36581	Embossed Handle Dessert Knives and Flat Dessert Forks	16.00	12.75
			(With Stainless Knives)		
29579	39579	36579	Hollow Handle Dinner Knives and Flat Dinner Forks	24.52	19.00
29487	39487	36487	Hollow Handle Dessert Knives and Flat Dessert Forks	23.62	18.25
29577	39577	36577	Embossed Handle Dinner Knives and Flat Dinner Forks	20.72	16.00

THE 43- AND 56-PIECE CHESTS

			43 PIECE CHESTS (With Plated Blade Knives)	Each	Each
29394	39394	36394	Hollow Handle Dinner Knives and Flat Dinner Forks	$36.40	$28.50
29392	39392	36392	Embossed Handle Dinner Knives and Flat Dinner Forks	29.50	23.50
			43 PIECE CHESTS (With Stainless Blade Knives)		
29395	39395	36395	Hollow Handle Dinner Knives and Flat Dinner Forks	37.68	29.50
29404	39404	36404	Embossed Handle Dinner Knives and Flat Dinner Forks	33.84	26.50
			56 PIECE CHESTS (With Plated Blade Knives)		
29400	39400	36400	Hollow Handle Dinner Knives and Flat Dinner Forks	48.16	38.00
29398	39398	36398	Embossed Handle Dinner Knives and Flat Dinner Forks	34.36	28.00
			56 PIECE CHESTS (With Stainless Blade Knives)		
29401	39401	36401	Hollow Handle Dinner Knives and Flat Dinner Forks	50.72	39.00
29407	39407	36407	Embossed Handle Dinner Knives and Flat Dinner Forks	43.04	33.00

THESE beautiful 43-piece and 56-piece Chests, as well as the 26-piece Chest-Buffet, offer the dealer a most unusual opportunity. Now he may display to the women of his locality perfectly balanced sets, satisfying definite yet varied individual needs. Buy and feature all three.

Contents of 43-Piece Chests

6 Dinner Knives
6 Dinner Forks
6 Individual Salad Forks
12 Teaspoons
6 Soup or Dessert Spoons
3 Table Spoons
1 Butter Knife
1 Sugar Spoon
1 Cold Meat Fork
1 Gravy Ladle

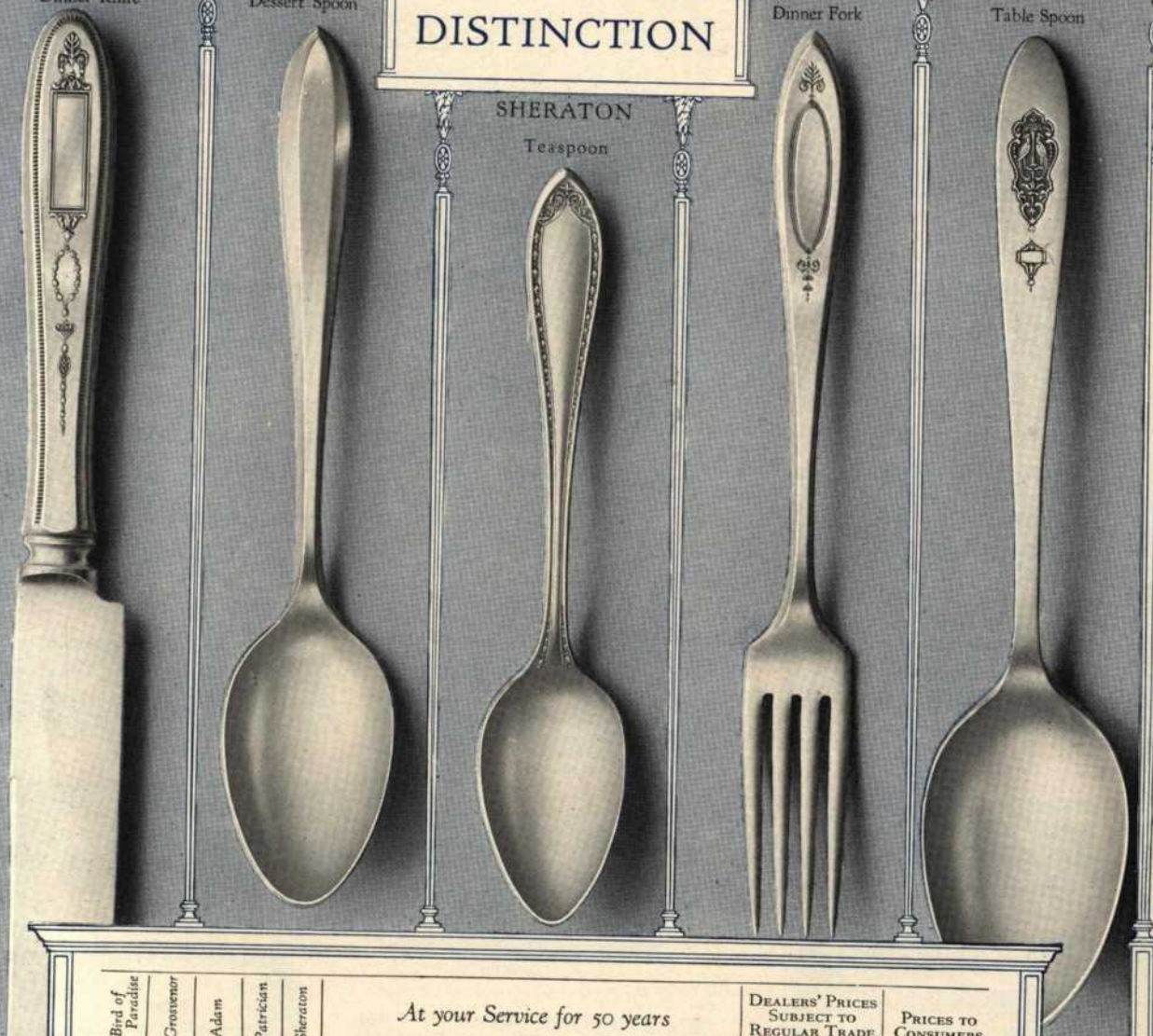
Contents of 56-Piece Chests

12 Teaspoons
6 Table Spoons
12 Dessert Spoons
12 Dinner Knives
12 Dinner Forks
1 Butter Knife
1 Sugar Spoon

Chests are Free–Both to you and your Customers

COMMUNITY PLATE

SILVERWARE of DISTINCTION



Bird of Paradise	Grosvenor	Adam	Patrician	Sheraton	At your Service for 50 years	Dealers' Prices Subject to Regular Trade Discount	Prices to Consumers.
					SPOONS—Six in Box	Per Doz.	Set of Six
12602	11602	10602	6602	9602	Tea	$9.00	$3.60
12603	11603	10603	6603	9603	Dessert	17.40	7.00
12605	11605	10605	6605	9605	Table	18.00	7.20
12604	11604	10604	6604	9604	Soup (Round Bowl)	18.00	7.20
					FORKS—Six in Box		
12607	11607	10607	6607	9607	Dinner or Medium	18.00	7.20
12606	11606	10606	6606	9606	Dessert	17.40	7.00
					KNIVES (Plated Blades)–Six in Gift Box		
12611	11611	10611	6611	9611	Hollow Handle Dinner or Medium	27.00	10.00
12612	11612	10612	6612	9612	Hollow Handle Dessert	26.48	9.75
12615	11615	10615	6615	9615	Modeled Handle Dinner or Medium	18.00	6.75
12616	11616	10616	6616	9616	Modeled Handle Dessert	17.68	6.50
					KNIVES (Stainless Blades)–Six in Gift Box		
12664	11664	10664	6664	9664	Hollow Handle Dinner or Medium	29.48	11.00
12665	11665	10665	6665	9665	Hollow Handle DeLuxe Stainless Dinner	32.76	12.00
12626	11626	10626	6626	9626	Hollow Handle Dessert	28.72	10.75
12594	11594	10594	6594	9594	Modeled Handle Dinner or Medium	20.60	7.50

All Prices Subject to Change without Notice.

Patrician and Sheraton Patterns shipped direct from factory.

COMMUNITY PLATE

CORRECT SERVICE PIECES
KNIFE & FORK SETS

EVERY article listed on this page lends itself admirably to gift giving; the range of pieces permits the widest latitude in selection. And gifts like these are in season the year around – for Weddings, Anniversaries, Birthdays, and for similar occasions.

More and more dealers are coming to the idea of displaying such items in price groups of $1 to $5 and $5 to $10, etc., enabling customers to select from price groups of their own choosing.

Bird of Paradise	Grosvenor	Adam	Patrician	Sheraton	*All Pieces Listed on this Page are Packed in Blue Velvet Lined Gift Boxes*	Dealer's Prices Subject to Regular Trade Discount	Prices to Consumers
					SPOONS	Per Doz.	
12625	11625	10625	6625	9625	*Coffee....6 in box	$9.36	$3.75 set
12601	11601	10601	6601	9601	*5 O'Clock Tea or Sherbet....6 in box	9.36	3.75 set
12622	11622	10622	6622	9622	*Bouillon or Consomme....6 in box	17.52	7.00 set
12629	11629	10629	6629	9629	*Iced Tea or Iced Drink....6 in box	15 00	6.00 set
12657	11657	10657	6657	9657	Ice Cream or Sundae....6 in box	13.76	5.50 set
12641	11641	10641	6641	9641	*Orange or Grapefruit....6 in box	13.76	5.50 set
12647	11647	10647	6647	9647	*Small Berry or Preserve....1 in box	37.44	2 50 each
12620	11620	10620	6620	9620	*Large Berry or Serving....1 in box	48.72	3.25 each
12619	11619	10619	6619	9619	*Baby (Bent Handle)....1 in box	14.88	1.00 each
12624	11624	10624	6624	....	Baby (Straight Handle)....1 in box	14.88	1.00 each
12650	11650	10650	6650	9650	*Sugar....1 in box	18.72	1.25 each
12483	11483	10483	6483	9483	Jam or Conserve....1 in box	18.72	1.25 each
12656	11656	10656	6656	9656	*Olive or Salted Nut....1 in box	26.16	1.75 each
12621	11621	10621	6621	9621	Pierced Bon Bon....1 in box	33.84	2.25 each
12636	11636	10636	6636	9636	Relish or Chutney....1 in box	22.56	1.50 each
					FORKS		
12667	11667	10667	6667	9667	*Cold Meat or Serving....1 in box	33.84	2.25 each
12668	11668	10668	6668	9668	*Small Cold Meat....1 in box	26.16	1.75 each
12660	11660	10660	6660	9660	Individual Pie....6 in box	20.00	8.00 set
12679	11679	10679	6679	9679	*Oyster or Seafood....6 in box	12.48	5.00 set
12646	11646	10646	6646	9646	*Pickle or Olive....1 in box	22.56	1.50 each
12688	11688	10688	6688	9688	*Individual Salad or Pastry....6 in box	17.52	7 00 set
12632	11632	10632	6632	9632	Ice Cream or Sherbet....6 in box	15.00	6.00 set
12990	11990	10990	6990	....	Cake....1 in box	37.44	2 50 each
12661	11661	10661	6661	....	Lemon or Relish....1 in box	14.88	1.00 each
12628	11628	10628	6628	....	*Baby (Straight Handle)....1 in box	14.88	1.00 each
					KNIVES (Plated Blades)		
12695	11695	10695	6695	9695	*Butter....1 in box	18.72	1.25 each
12697	11697	10697	6697	9697	*Individual Butter Spreaders (Flat Handle)....6 in box	15.00	6.00 set
12707	11707	10707	6707	9707	Individual Butter Spreaders (Hollow Handle)....6 in box	26.68	10.00 set
12989	11989	10989	6989	9989	Cake or Bread....1 in box	63.84	4.00 each
					KNIFE AND FORK SETS (Plated Blades) (6 Knives and 6 Forks)	Per Set	
12742	11742	10742	6742	9742	*Hollow Handle Dinner Knives and Flat Dinner Forks	22.50	17.20 set
12743	11743	10743	6743	9743	Hollow Handle Dessert Knives and Flat Dessert Forks	21.94	16 75 set
12803	11803	10803	6803	9803	Modeled Handle Dinner Knives and Flat Dinner Forks	18.00	14.00 set
12982	11982	10982	6982	9982	Modeled Handle Dessert Knives and Flat Dessert Forks	17.54	13.50 set
					(With Stainless Blade Knives)		
12598	11598	10598	6598	9598	Hollow Handle Dinner Knives and Flat Dinner Forks	23.74	18.25 set
12557	11557	10557	6557	9557	Hollow Handle DeLuxe Dinner Knives and Flat Dinner Forks	25.38	19.25 set
12599	11599	10599	6599	9599	Hollow Handle Dessert Knives and Flat Dessert Forks	23.06	17.75 set
12597	11597	10597	6597	9597	Modeled Handle Dinner Knives and Flat Dinner Forks	19.30	14.75 set
						Per Doz.	
12704	11704	10704	6704	9704	Fruit (Hollow Handle)....6 in box	27.00	10.00 set
12698	11698	10698	6698	9698	Fruit (Modeled Handle)....6 in box	17.68	6.50 set
					LADLES		
12715	11715	10715	6715	9715	*Salad Dressing or Small....1 in box	30.00	2 00 each
12717	11717	10717	6717	9717	*Serving or Gravy....1 in box	37.44	2.50 each
12721	11721	10721	6721	9721	Medium Soup or Serving....1 in box	112.56	7.50 each
					CARVERS (Stainless Blades)	Per Set	
12725	11725	10725	6725	9725	Large (3-piece, Knife, Fork and Steel) Carving Set (H. H.)	21.32	16.00 set
12728	11728	10728	6728	9728	*Small (2-piece) Steak or Game (Hollow Handle)	8.68	6.50 set
12596	11596	10596	6596	9596	*Small (2-piece) Steak or Game (Modeled Handle)	7.34	5.50 set
						Pair	
12689	11689	10689	6689	9689	Game Shears....1 in box	13.32	10.00 pair
					MISCELLANEOUS	Per Doz.	
12708	11708	10708	6708	9708	Sugar Tongs....1 in box	22.56	1.50 each
12623	11623	10623	6623	9623	*Jelly Server....1 in box	22.56	1.50 each
12484	11484	10484	6484	9484	*Pierced Pastry or Pie Server....1 in box	60.00	4.00 each
12690	11690	10690	6690	9690	*Pierced Round Server (for Tomatoes, Cucumbers, etc.)....1 in box	45.12	3.00 each
12815	11815	10815	6815	9815	Cheese Knife or Server (Hollow Handle)....1 in box	37.44	2.50 each
12710	11710	10710	6710	9710	Pie or Ice Cream Server (Hollow Handle)....1 in box	60.00	4.00 each
					SETS	Per Set	
12738	11738	10738	6738	9738	Baby (Bent Spoon and Straight Fork)	2.48	2.00 set
12566	11566	10566	6566	....	Baby (Straight Spoon and Straight Fork)	2.48	2.00 set
12737	11737	10737	6737	9737	*Child's (Spoon, Fork and Flat Knife)	3.76	3 00 set
12735	11735	10735	6735	9735	*Child's (Spoon, Fork and Hollow Handle Knife)	5.00	4.00 set
12729	11729	10729	6729	9729	Butter and Sugar	3.12	2.50 set
12791	11791	10791	6791	....	Cake (Cake Knife and Cake Fork)	8.44	6.50 set

*Illustrated on opposite page. Note—When number is omitted piece is not made.

The *Bird of Paradise* and *Grosvenor* designs are furnished in Bright Butler finish, the *Adam* and *Patrician* in Bright and the *Sheraton* in Grey.

Patrician and Sheraton Patterns shipped direct from factory.

COMMUNITY PLATE

BABY SPOON (Bent Handle)

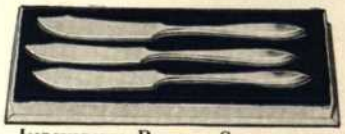
SUGAR SPOON

COLD MEAT OR SERVING FORK
SMALL COLD MEAT OR SARDINE FORK

ICED TEA OR ICED DRINK SPOONS

JELLY SERVER

PIERCED ROUND SERVER



INDIVIDUAL BUTTER SPREADERS

INDIVIDUAL SALAD FORKS

PICKLE OR OLIVE FORK

SMALL STEAK OR GAME SET (H. H.)
SMALL STEAK OR GAME SET (Mod. H.)

BOUILLON OR CONSOMME SPOONS

BUTTER KNIFE

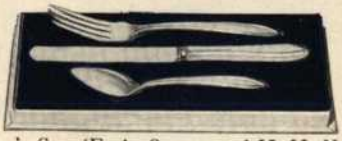
KNIFE AND FORK SET

BABY FORK

SALAD DRESSING OR SMALL LADLE
SERVING OR GRAVY LADLE

LARGE BERRY OR SERVING SPOON
SMALL BERRY OR PRESERVE SPOON

OYSTER OR SEAFOOD FORKS

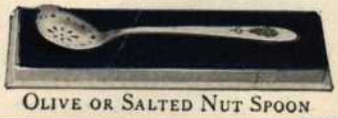


CHILD'S SET (Fork, Spoon and H. H. Knife)
CHILD'S SET (Fork, Spoon and Flat Knife)

PIERCED PASTRY SERVER

AFTER DINNER COFFEE SPOONS
5 O'CLOCK TEA OR SHERBET SPOONS

ORANGE OR GRAPE FRUIT SPOONS



OLIVE OR SALTED NUT SPOON

PATRICIAN and SHERATON Patterns shipped direct from factory.

COMMUNITY PLATE

THE 26-PIECE CHEST-TRAY

Free, with Each Silverware Set

THIS new Chest-Tray—furnished free with each 26-pc. set of COMMUNITY PLATE—is both beautiful and practical. The lid is readily detachable. Thus the Chest becomes a most useful Tray—for store purposes and in the home. Slips easily into the sideboard drawer.

A beautiful, distinctive setting for the Silverware. With cover—*a Chest;* With cover removed—*a Tray.*

Contents

6 Teaspoons
6 Table Spoons
6 Dinner Knives
6 Dinner Forks
1 Butter Knife
1 Sugar Spoon

Bird of Paradise	Grosvenor	Adam	Patrician	Sheraton	*Stainless Knives Have the Call. Why not specify "Stainless De Luxe?"* **CHEST TRAYS** (26 PIECES)	DEALERS' PRICES SUBJECT TO REGULAR TRADE DISCOUNT	PRICES TO CONSUMERS,
					KNIVES WITH PLATED BLADES	Each	Each
12584	11584	10584	6584	9584	Hollow Handle Dinner Knives and Flat Dinner Forks	$39.12	$30.50
12580	11580	10580	6580	9580	Hollow Handle Dessert Knives and Flat Dessert Forks	38.56	30.00
12585	11585	10585	6585	9585	Modeled Handle Dinner Knives and Flat Dinner Forks	34.62	27.25
12581	11581	10581	6581	9581	Modeled Handle Dessert Knives and Flat Dessert Forks	34.16	26.75
					KNIVES WITH STAINLESS BLADES		
12579	11579	10579	6579	9579	Hollow Handle Dinner Knives and Flat Dinner Forks	40.36	31.50
12553	11553	10553	6553	9553	Hollow Handle DeLuxe Dinner Knives and Flat Dinner Forks	42.00	32.50
12487	11487	10487	6487	9487	Hollow Handle Dessert Knives and Flat Dessert Forks	39.68	31.00
12577	11577	10577	6577	9577	Modeled Handle Dinner Knives and Flat Dinner Forks	35.92	28.00
					26-PIECE CHESTS		
150	150	150	150	150	Seal Grain Leatherette Flat—Empty	$12.50	$ 7.75
12983	11983	10983	6983	9983	With H. H. Dinner Knives	51.60	38.00
12984	11984	10984	6984	9984	With Modeled Handle Dinner Knives	47.10	35.00
130	130	130	130	130	Heavy Mahogany, Flat—Empty	19.60	12.50
12994	11994	10994	6994	9994	With H. H. Dinner Knives	58.70	43.00
12995	11995	10995	6995	9995	With Modeled Handle Dinner Knives	54.20	40.00
148	148	148	148	148	Genuine Mahogany, with Drawer—Empty	20.00	12.50
12848	11848	10848	6848	9848	With H. H. Dinner Knives	59.10	43.00
12947	11947	10947	6947	9947	With Modeled Handle Dinner Knives	54.60	40.00

Add-a-Piece Cabinets For Combinations from 36 to 300 Pieces with Hollow Handle Knives	DEALER'S PRICES SUBJECT TO REGULAR TRADE DISCOUNT	PRICES TO CONSUMERS
36 to 60 Piece Cabinet (with 45 pieces)	$105.20	$77.00
55 to 90 Piece Cabinet (with 72 pieces)	167.50	120.00
100 to 200 Piece Cabinet (with 140 pieces)	378.00	240.00
200 to 300 piece Cabinet (with 255 pieces)	520.00	390.00

NOTE—If Stainless Blade Knives are desired in any Cabinet add the difference in cost between Plated and Stainless Blade Knives listed on Page 1.

PATRICIAN and SHERATON Patterns shipped direct from factory.

Twenty Year Replacement Guarantee

TUDOR PLATE

By the Makers of Community Plate

DUCHESS DESIGN | QUEEN BESS DESIGN | BARONET DESIGN

Queen Bess	Baronet	Duchess	20 Year Replacement Guarantee	Dealers' Prices Subject to Regular Trade Discount	Prices to Consumers
			SPOONS—12 IN BOX	Per Doz.	Set of Six
29602	39602	36602	Tea	$4.00	$1.60
29603	39603	36603	Dessert	7.48	3.00
29605	39605	36605	Table	8.00	3.20
29604	39604	36604	Soup (Round Bowl)	8.00	3.20
			FORKS—12 IN BOX		
29607	39607	36607	Dinner or Medium	8.00	3.20
29606	39606	36606	Dessert	7.48	3.00
			KNIVES (PLATED BLADES)—Six in Gift Box		
29611	39611	36611	H. H. Dinner or Medium	22.80	8.50
29612	39612	36612	Hollow Handle Dessert	21.56	8.00
29615	39615	36615	Embossed Handle Dinner or Medium	9.00	3.50
29616	39616	36616	Embossed Handle Dessert	8.76	3.40
29698	39698	36698	Embossed Handle Fruit	9.08	3.50
			KNIVES (STAINLESS BLADES)—Six in Gift Box		
29664	39664	36664	H. H. Dinner or Medium	25.36	9.50
29626	29626	36626	Hollow Handle Dessert	24.00	9.00
29594	39594	36594	Embossed Handle Dinner or Medium	17.68	6.50
			CORRECT SERVICE PIECES		
29650	39650	36650	Sugar Spoon....1 in blue lined gift box	11.28	.75 each
29695	39695	36695	Butter Knife....1 in blue lined gift box	11.28	.75 each
29729	39729	36729	Butter and Sugar Set....Set in blue lined gift box	22.56	1.50 set

Twenty Year Replacement Guarantee

TUDOR PLATE

By the Makers of Community Plate

CORRECT SERVICE PIECES
KNIFE & FORK SETS

DESIRABLE gift items in Silverware are quick to move – especially those of *known value* and *moderately priced*. The Tudor Plate pieces here listed are all particularly suited to this purpose and the range in prices is sufficient to meet widely varying demands.

Tudor Plate makes ideal gifts for all occasions – Weddings, Birthdays, Anniversaries – twelve months in the year.

Queen Bess	*Baronet*	*Duchess*	CORRECT SERVICE PIECES *All Pieces Listed on this Page are Packed in Blue Lined Gift Boxes*	DEALER'S PRICES SUBJECT TO REGULAR TRADE DISCOUNT	PRICES TO CONSUMERS
			SPOONS	Per Doz.	
29625	39625	36625	*Coffee....6 in box	$5.00	$2.00 set
29601	39601	36601	*5 O'Clock Tea or Sherbet....6 in box	5.00	2.00 set
29622	39622	36622	*Bouillon or Consomme....6 in box	8.76	3.50 set
29629	39629	36629	*Iced Tea or Iced Drink....6 in box	8.12	3.25 set
29657	39657	36657	*Ice Cream or Sundae....6 in box	7.52	3.00 set
29641	39641	36641	*Orange or Grapefruit....6 in box	7.52	3.00 set
29620	39620	36620	*Berry or Serving....1 in box	30.00	2.00 each
29619	39619	36619	*Baby (Bent Handle)....1 in box	9.84	.65 each
29624	39624	36624	Baby (Straight)....1 in box	9.84	.65 each
29483	39483	36483	Jam or Conserve....1 in box	11.28	.75 each
			FORKS		
29667	39667	36667	*Cold Meat or Serving....1 in box	18.72	1.25 each
29668	39668	36668	*Small Cold Meat Fork....1 in box	15.12	1.00 each
29679	39679	36679	*Oyster or Seafood....6 in box	8.12	3.25 set
29646	39646	36646	*Pickle or Olive....1 in box	15.12	1.00 each
29688	39688	36688	*Individual Salad or Pastry....6 in box	11.88	4.75 set
29628	39628	36628	Baby (Straight)....1 in box	9.84	.65 each
			KNIVES (PLATED BLADES)		
29697	39697	36697	*Individual Butter Spreaders....6 in box	10.64	4.25 set
			KNIFE AND FORK SETS		
			6 KNIVES AND 6 FORKS IN BLUE LINED BOX	Per Set	
29742	39742	36742	Hollow Handle Dinner Knives and Flat Dinner Forks....	15.40	11.75 set
29743	39743	36743	Hollow Handle Dessert Knives and Flat Dessert Forks....	14.52	11.00 set
29803	39803	36803	Embossed Handle Dinner Knives and Flat Dinner Forks....	8.50	6.75 set
29804	39804	36804	Embossed Handle Dessert Knives and Flat Dessert Forks....	8.12	6.40 set
			WITH STAINLESS BLADE KNIVES		
29598	39598	36598	Hollow Handle Dinner Knives and Flat Dinner Forks....	16.68	12.75 set
29599	39599	36599	Hollow Handle Dessert Knives and Flat Dessert Forks....	15.74	12.00 set
29597	39597	36597	Embossed Handle Dinner Knives and Flat Dinner Forks....	12.84	9.75 set
			LADLES	Per Doz.	
29715	39715	36715	*Salad Dressing or Small....1 in box	15.12	1.00 each
29717	39717	36717	*Serving or Gravy....1 in box	22.56	1.50 each
29721	39721	36721	Medium Soup or Serving....1 in box	60.00	4.00 each
			CARVERS	Per Set	
29728	39728	36728	*2-Piece Steak or Game H. H. (Stainless Blades)....Set in box	8.00	6.00 set
			MISCELLANEOUS	Per Doz.	
29708	39708	36708	Sugar Tongs....1 in box	15.12	1.00 each
29623	39623	36623	Jelly Server....1 in box	15.12	1.00 each
29690	39690	36690	*Pierced Round Server....1 in box	30.00	2.00 each
			SETS	Per Set	
29737	39737	36737	*Child's (Spoon, Fork and Flat Knife)....Set in box	2.50	2.00 set
29738	39738	36738	Baby (Bent Spoon and Straight Fork)....Set in box	1.64	1.30 set
29566	39566	36566	Baby (Straight Spoon and Straight Fork)....Set in box	1.64	1.30 set
			STANDARD 26 PIECE CHEST	Each	Each
465B	465B	465B	Oak Finish with Drawer, Empty....	2.50	1.75
29860	39860	36860	with Embossed Handle Dinner Knives and Flat Dinner Forks....	18.88	14.75
29896	39896	36896	with Embossed Handle Dessert Knives and Flat Dessert Forks....	18.50	14.50
29859	39859	36859	with Hollow Handle Dinner Knives and Flat Dinner Forks....	25.78	20.00
464B	464B	464B	Mahogany Finish with Drawer, Empty....	2.50	1.75
29930	39930	36930	with Embossed Handle Dinner Knives and Flat Dinner Forks....	18.88	14.75
29494	39494	36494	with Embossed Handle Dessert Knives and Flat Dessert Forks....	18.50	14.50
29928	39928	36928	with Hollow Handle Dinner Knives and Flat Dinner Forks....	25.78	20.00

* Illustrated on opposite page. The *Queen Bess* and *Duchess* designs are furnished in Bright Butler finish; the *Baronet* in Bright or Grey

NOTE—If Stainless Blade Knives are desired in any Chest combination, add the difference in cost between Plated and Stainless Blades listed on preceding page.

Twenty Year Replacement Guarantee

TUDOR PLATE

By the Makers of Community Plate

LARGE BERRY OR SERVING SPOON

ICED TEA OR ICED DRINK SPOONS

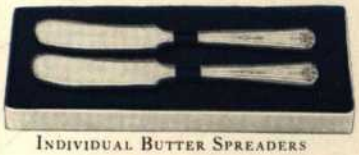
ORANGE OR GRAPE FRUIT SPOONS

SALAD DRESSING OR SMALL LADLE

SERVING OR GRAVY LADLE

5 O'CLOCK TEA OR SHERBET SPOONS

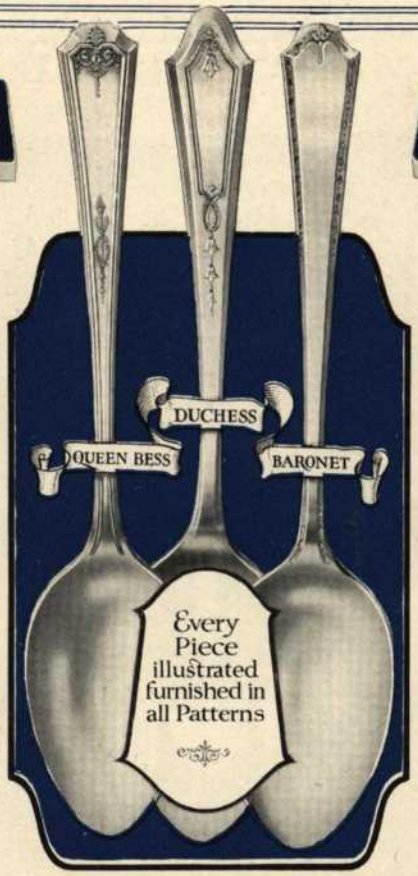
AFTER DINNER COFFEE SPOONS



INDIVIDUAL BUTTER SPREADERS

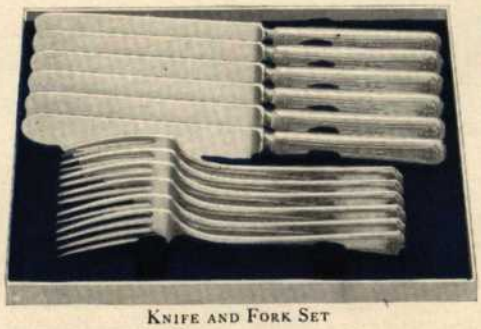
ICE CREAM OR SUNDAE SPOONS

PICKLE OR OLIVE FORK



CHILD'S SET (Fork, Spoon and Flat Knife)

SMALL STEAK OR GAME SET (H. H.)



KNIFE AND FORK SET

COLD MEAT OR SERVING FORK

SMALL COLD MEAT OR SARDINE FORK

PIERCED ROUND SERVER

SUGAR SPOON

BUTTER KNIFE

OYSTER OR SEAFOOD FORKS

INDIVIDUAL SALAD FORKS

BOUILLON OR CONSOMME SPOONS

BABY SPOON (Bent Handle)

Twenty Year Replacement Guarantee

TUDOR PLATE

By the Makers of Community Plate

THE 26-PIECE CHEST-BUFFET

—Free, with Each Silverware Set

THIS Chest-Buffet and the beautiful new 43- and 56-piece Chests shown enable the dealer to meet the desires of the Bride—the large or small family or those who entertain. These sets have been most carefully chosen to fit differing home requirements. The Chest-Buffet and the Chests are free; you pay only the regular price of the Silverware.

Ideal *for* Store and Window *Display*

Contents

6 Teaspoons
6 Table Spoons
6 Dinner Knives
6 Dinner Forks
1 Butter Knife
1 Sugar Spoon

Queen Bess	Baronet	Duchess		Dealers' Prices Subject to Regular Trade Discount	Prices to Consumers,
			(With Plated Blades)	Each	Each
29584	39584	36584	Hollow Handle Dinner Knives and Flat Dinner Forks	$23.28	$18.00
29580	39580	36580	Hollow Handle Dessert Knives and Flat Dessert Forks	22.40	17.25
29585	39585	36585	Embossed Handle Dinner Knives and Flat Dinner Forks	16.38	13.00
29581	39581	36581	Embossed Handle Dessert Knives and Flat Dessert Forks	16.00	12.75
			(With Stainless Knives)		
29579	39579	36579	Hollow Handle Dinner Knives and Flat Dinner Forks	24.52	19.00
29487	39487	36487	Hollow Handle Dessert Knives and Flat Dessert Forks	23.62	18.25
29577	39577	36577	Embossed Handle Dinner Knives and Flat Dinner Forks	20.72	16.00

THE 43- AND 56-PIECE CHESTS

			43 PIECE CHESTS (With Plated Blade Knives)	Each	Each
29394	39394	36394	Hollow Handle Dinner Knives and Flat Dinner Forks	$36.40	$28.50
29392	39392	36392	Embossed Handle Dinner Knives and Flat Dinner Forks	29.50	23.50
			43 PIECE CHESTS (With Stainless Blade Knives)		
29395	39395	36395	Hollow Handle Dinner Knives and Flat Dinner Forks	37.68	29.50
29404	39404	36404	Embossed Handle Dinner Knives and Flat Dinner Forks	33.84	26.50
			56 PIECE CHESTS (With Plated Blade Knives)		
29400	39400	36400	Hollow Handle Dinner Knives and Flat Dinner Forks	48.16	38.00
29398	39398	36398	Embossed Handle Dinner Knives and Flat Dinner Forks	34.36	28.00
			56 PIECE CHESTS (With Stainless Blade Knives)		
29401	39401	36401	Hollow Handle Dinner Knives and Flat Dinner Forks	50.72	39.00
29407	39407	36407	Embossed Handle Dinner Knives and Flat Dinner Forks	43.04	33.00

THESE beautiful 43-piece and 56-piece Chests, as well as the 26-piece Chest-Buffet, offer the dealer a most unusual opportunity. Now he may display to the women of his locality perfectly balanced sets, satisfying definite yet varied individual needs. Buy and feature all three.

Contents of 43-Piece Chests

6 Dinner Knives
6 Dinner Forks
6 Individual Salad Forks
12 Teaspoons
6 Soup or Dessert Spoons
3 Table Spoons
1 Butter Knife
1 Sugar Spoon
1 Cold Meat Fork
1 Gravy Ladle

Contents of 56-Piece Chests

12 Teaspoons
6 Table Spoons
12 Dessert Spoons
12 Dinner Knives
12 Dinner Forks
1 Butter Knife
1 Sugar Spoon

Chests are Free—Both to you and your Customers

Detroit Jewel Stoves and Furnaces

The line of Stoves, Ranges, Heaters and Furnaces shown on the following pages are manufactured by the Detroit Stove Works, the largest plant of its kind in the world. We can furnish special catalogs on request with full information on various lines.

On the following pages style letters are employed to differentiate class, position of oven and equipment. The letters are determined by using the first letter of the style or part desired. Remembering this simple rule will make it easy to write orders quickly and accurately.

Special attention is called to the fact that in accord with the Standardization Committee's instructions the right and left oven styles of Detroit Jewel Gas Ranges are indicated by the oven position, rather than by the cooking top position.

KEY TO STYLE LETTERS

Style Letter

S (Prefix.) Sherardized (Rust-Proof) oven linings.
VN Natural gas construction with open top, raised burners, steel oven bottom.
N Natural gas construction with closed top, lowered burners, cast oven bottom.
R Right hand oven.
L Left hand oven.
G Glass oven door (Pyrex).
B White enamel splasher back.

Enameled splashers are "extras," and not a part of the regular enameling equipment. Specify in orders if splashers are wanted.

Note: When ordering, it is understood that the appliance is for artificial gas unless otherwise designated.

Detroit Jewel Oven Heat Regulator

Showing application of Heat Regulator to Gas Range.

This device is neat in appearance, compact, and designed to harmonize with the range. As illustrated, it simply takes the place of the oven valve on a range, and is actually as easy to adjust as a gas range valve.

This Regulator has no delicate or complicated parts to get out of order. It will be furnished to the dealer separate from the range to be carried in stock as a separate appliance. It can be attached in ten minutes.

A glance at the dial tells how to use this Regulator. Just a turn gives and holds any baking heat required. It operates so that any woman can understand it.

The marked graduations on the dial include different intensities of heat required for every kind of work. It is guaranteed to work satisfactorily.

The Detroit Jewel Oven Heat Regulator can be furnished for the following Cabinet Gas Ranges: 411, 404, 419, 408, 403, 417, 407, 402 and 405 series.

Extra . . . . . Each, **$5.50**

Wilcolator Thermoven Oven Heat Regulator

Showing application of Heat Regulator to Gas Range.

The Wilcolator Thermoven Heat Regulator is just what the name implies. It regulates the heat in the baking oven to any temperature desired and maintains that same even temperature. The operator merely sets the dial to the temperature required for the particular class of work to be done, turns on the gas and forgets about it until the bake is completed.

It has merely one connection from manifold to the dial which fits close to the front of the range and does not take up any space from the cooking top, or increase the size of the floor space required for the range to which it is attached.

The sensitive thermostat which operates the device is very small and compact and fits just inside the oven wall, but does not project over the oven guides, and therefore does not interfere with the free use of the entire oven.

The control dial is finished in polished ebony with figures for temperatures marked in red, and lettering indicating the proper position for various classes of work in white.

The Wilcolator Thermoven Heat Regulator requires no mechanical adjustments after leaving factory. Each instrument is carefully calibrated before shipping, and will operate at the desired temperatures by simply setting the dial. Nothing to get out of order, but can be installed only at the factory.

The following Detroit Jewel Cabinet Ranges can be equipped with the Wilcolator Thermoven Heat Regulator at a slight additional cost:

411 Series with both right and left ovens.
408 Series with both right and left ovens.
407 Series with both right and left ovens.

Extra . . . . . Each, **$23.00**

Detroit Jewel Kitchen Heater Gas Ranges

No. 414 LB

The same Range as shown above only in finish.

All exposed steel and cast parts finished in baked ebonite. Rust-proof oven linings. One giant burner, three standard burners. Single valve double line oven burner. White enamel burner tray. White enamel broiler pan. Gas lighter for kitchen heater.

No.	Style	Oven	Gas	Weight	Each
413	RB	Right	Art.	375	$128.00
413	LB	Left	Art.	375	$128.00
413	VNRB	Right	Nat.	375	$128.00
413	VNLB	Left	Nat.	375	$128.00

Nickeled Pyrex glass oven door or water front can be furnished if desired at extra cost.

Measurements.

Floor space required	52x25½
Baking oven	16x18x12
Broiling and toasting oven	16x18x12
Warming compartment	16x18x7½
Size of top plate, gas	19x21
Size of top plate, coal	11½x21
Height of cooking top	32½
Height of high shelf	14
Size of flue collar	6

A gas range and kitchen heater combined in one.

Oven top, high shelf, back guard, splashers and four legs white enameled; oven, broiler and warming closet door frames, journals, end top support and ash pit door nickeled. Rust-proof oven lining. One giant burner, three standard burners. Single valve double line oven burner. White enamel burner tray. White enamel broiler pan. Gas lighter for kitchen heater.

No.	Style	Oven	Gas	Weight	Each
414	RB	Right	Art.	375	$157.50
414	LB	Left	Art.	375	$157.50
414	VNRB	Right	Nat.	375	$157.50
414	VNLB	Left	Nat.	375	$157.50

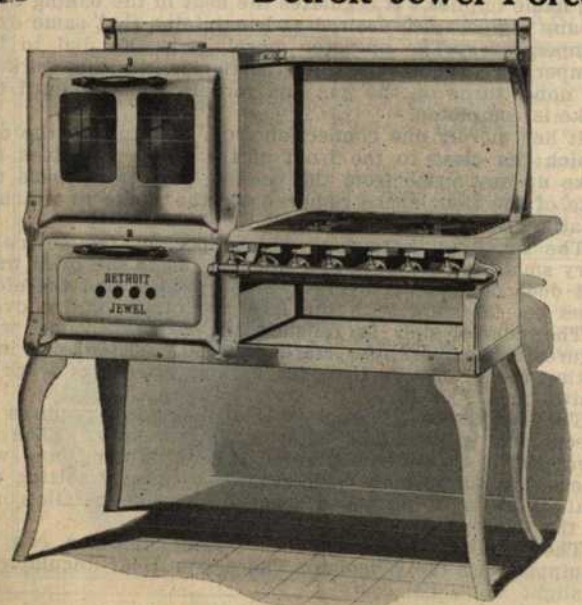
Nickeled Pyrex glass oven door or water front can be furnished if desired at extra cost.

Measurements.

Floor space required	52x25½
Baking oven	16x18x12
Broiling and toasting oven	16x18x12
Warming Compartment	16x18x7½
Size of top plate, gas	19x21
Size of top plate, coal	11½x21
Height of cooking top	32½
Height of high shelf	14
Size of flue collar	6

No. 413LB

Detroit Jewel Porcelain Enamel Gas Ranges



No. 391 LGB

Furnished in snow-white porcelain enamel and nickel.

Pyrex glass oven door. Oven and broiler door frames, shelf bracket, back guard corners and front manifold nickeled. Rust-proof oven linings. Ebonited burners. One giant burner, three standard burners, one simmering burner. Two double-line oven burners with two valve control on front manifold. Enamel burner tray. Enamel broiler pan. Can furnish with Porcelain oven door at slight reduction in cost.

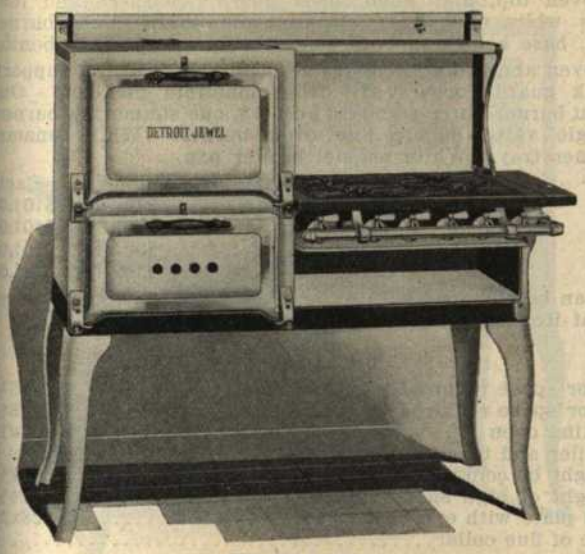
No.	Style	Oven	Gas	Weight	Each
391	RGB	Right	Art.	320	$162.00
391	LGB	Left	Art.	320	$162.00
391	VNRGB	Right	Nat.	320	$162.00
391	VNLGB	Left	Nat.	320	$162.00

Measurements.

Floor space required with end shelf	51x25½
Floor space required without end shelf	48x25½
Baking oven	18x18x14
Broiler and toasting oven	18x18x 9
Height of cooking top	32½
Height of high shelf	16½
Top plate with end shelf	28x22
Size of flue collar	4

Any of the above Ranges can also be furnished in style "N" with closed top and cast oven bottom for natural gas at extra cost.

Detroit Jewel Porcelain Enamel Gas Ranges



No. 411 L. B.

Finished in Snow-White porcelain enamel with cooking top, burner box sides and base band in baked ebonite.

Oven and broiler door frames, journals, shelf bracket, end top support, back guard corners and front manifold nickeled. Rust-proof oven linings. Ebonited burners. One giant burner, three standard burners. Single valve double line oven burner. White enamel burner tray. White enamel broiler pan.

No.	Style	Oven	Gas	Weight	Each
404	RB	Right	Art.	235	$115.50
404	LB	Left	Art.	235	$115.50
404	VNRB	Right	Nat.	235	$115.50
404	VNLB	Left	Nat.	235	$115.50

Measurements.

Floor space required with end shelf.....43½x25½
Floor space required without end shelf.....40½x25½
Baking oven.....16x18x12
Broiler and toasting oven.....16x18x 9
Height of cooking top.....32½
Height of high shelf.....14½
Top plate with end shelf.....23½x22
Size of flue collar..... 4

No. 419 L. B.

Finished in Snow-White porcelain enamel with cooking top, burner box sides and base band in baked ebonite.

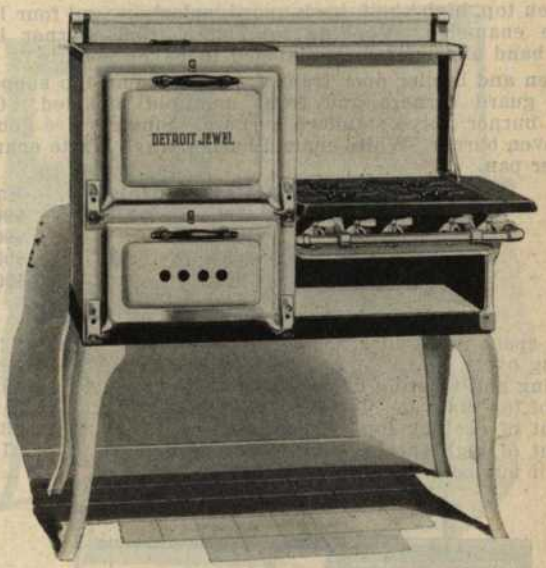
Oven and broiler door frames, journals, shelf bracket, end top support, back guard corners and front manifold nickeled. Rust-proof oven linings. Ebonited burners. One giant burner, three standard burners. Single valve double line oven burner. White enamel burner tray. White enamel broiler pan.

No.	Style	Oven	Gas	Weight	Each
411	RB	Right	Art.	250	$130.50
411	LB	Left	Art.	250	$130.50
411	VNRB	Right	Nat.	250	$130.50
411	VNLB	Left	Nat.	250	$130.50

Can be equipped with either Wilcolator or Detroit Jewel Heat Regulator if desired.

Measurements.

Floor space required with end shelf.....51x25½
Floor space required without end shelf.....48x25½
Baking oven.....18x18x12
Broiler and toasting oven.....18x18x 9
Height of cooking top.....32½
Height of high shelf.....14½
Top plate with end shelf.....28x22
Size of flue collar..... 4



No. 404 L. B.

Finished in Snow-White porcelain enamel with cooking top, burner box sides and base band in baked ebonite.

Oven and broiler door frames, journals, shelf bracket, end top support, back guard corners and front manifold nickeled. Rust-proof oven linings. Ebonited burners. One giant burner, three standard burners. Loop oven burner. White enamel burner tray. White enamel broiler pan.

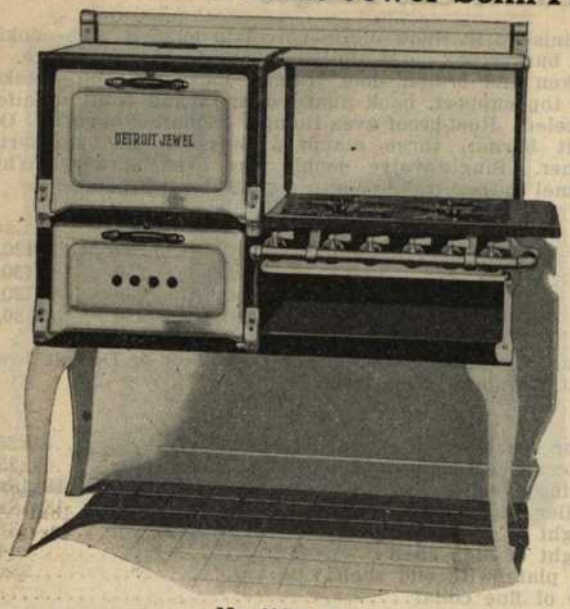
No.	Style	Oven	Gas	Weight	Each
419	RB	Right	Art.	210	$105.00
419	LB	Left	Art.	210	$105.00
419	VNRB	Right	Nat.	210	$105.00
419	VNLB	Left	Nat.	210	$105.00

Measurements.

Floor space required.....36x24
Baking oven.....14x18x12
Broiler and toasting oven.....14x18x 9
Size of cooking top.....18¼x20¼
Height of cooking top.....32
Height of high shelf.....14¼
Size of flue collar..... 4

Any of the above Ranges can be equipped with Detroit Jewel Heat Regulator if desired. Can also be furnished in style "N" with closed top and cast oven bottom for natural gas at extra cost. Can be furnished with Pyrex glass oven door at extra cost.

Detroit Jewel Semi-Porcelain Enamel Gas Ranges



No. 408 L. B.

Oven top, high shelf, back guard, splashers and four legs white enameled. Cooking top, main front, burner box, base band and body ends finished in baked ebonite.

Oven and broiler door frames, journals, end top support, back guard corners and front manifold nickeled. One giant burner, three standard burners. Single valve double line oven burner. White enamel burner tray. White enamel broiler pan.

No.	Style	Oven	Gas	Weight	Each
403	RB	Right	Art.	215	$90.50
403	LB	Left	Art.	215	$90.50
403	VNRB	Right	Nat.	215	$90.50
403	VNLB	Left	Nat.	215	$90.50

Measurements.

Floor space required....43½x25½
Baking oven....16x18x12
Broiling and toasting oven....16x18x 9
Size of top plate....23½x22
Height of cooking top....32½
Height of high shelf....14½
Size of flue collar....4

No. 417 L. B.

Oven top, high shelf, back guard, splashers and four legs white enameled. Cooking top, main front, burner box, base band and body ends finished in baked ebonite.

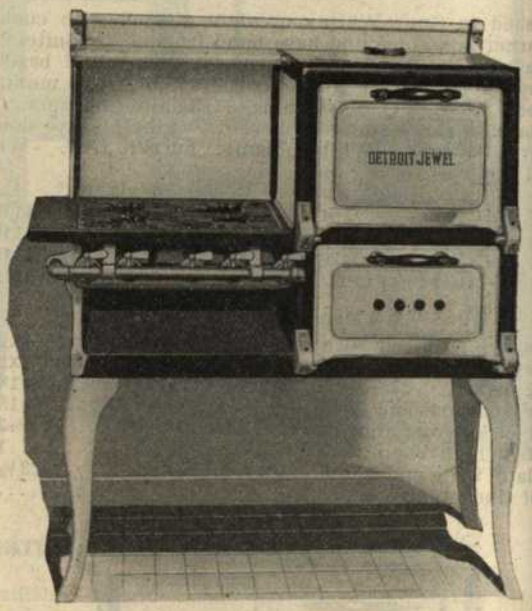
Oven and broiler door frames, journals, end top support, back guard corners and front manifold nickeled. One giant burner, three standard burners, one simmering burner. Single valve double line oven burner. White enamel burner tray. White enamel broiler pan.

No.	Style	Oven	Gas	Weight	Each
408	RB	Right	Art.	230	$101.00
408	LB	Left	Art.	230	$101.00
408	VNRB	Right	Nat.	230	$101.00
408	VNLB	Left	Nat.	230	$101.00

Can be equipped with either Wilcolator or Detroit Jewel Heat Regulator if desired.

Measurements.

Floor space required with end shelf....51x25½
Floor space required without end shelf....48x25½
Baking oven....18x18x12
Broiler and toasting oven....18x18x 9
Height of cooking top....32½
Height of high shelf....14½
Top plate with end shelf....28x22
Size of flue collar....4



No. 403 R. B.

Back guard, splashers and two front legs white porcelain enamel. Cast iron main front and cooking top finished in baked ebonite. Balance of range in blue steel finish.

Back guard corners and front manifold nickeled. One giant burner, three standard burners. Loop oven burner. White enamel burner tray. Blue steel broiler pan.

No.	Style	Oven	Gas	Weight	Each
417	RB	Right	Art.	200	$68.50
417	LB	Left	Art.	200	$68.50
417	VNRB	Right	Nat.	200	$68.50
417	VNLB	Left	Nat.	200	$68.50

Measurements.

Floor space required....36x24
Baking oven....14x18x12
Broiler and toasting oven....14x18x 9
Size of cooking top....18¼x20¼
Height of cooking top....32
Height of high shelf....14¼
Size of flue collar....4

Any of the above Ranges can be equipped with Detroit Jewel Heat Regulator if desired. Can also be furnished in style "N" with closed top and cast oven bottom for natural gas at extra cost. Can be furnished with Pyrex glass oven door at extra cost.

Detroit Jewel Cabinet Gas Ranges

No. 380 RGB.

Rust-proof oven linings. One giant burner, three standard burners, one simmering burner. Two double-line oven burners with two valve control on front manifold. Enamel burner tray. Enamel broiler pan.

No.	Style	Oven	Gas	Weight	Each
380	RGB	Right	Art.	255	$96.50
380	LGB	Left	Art.	255	$96.50
380	VNRGB	Right	Nat.	255	$96.50
380	VNLGB	Left	Nat.	255	$96.50

Can be furnished with porcelain oven door at slight reduction in cost.

Measurements.

Floor space required with end shelf.....51x25½
Floor space required without end shelf.....48x25½
Baking oven.....18x18x14
Broiler and toasting oven.....18x18x 9
Height of cooking top.....32½
Height of high shelf.....16½
Top plate with end shelf.....28x22
Size of flue collar..... 4

One giant burner, three standard burners, one simmering burner. Single valve double line oven burner. White enamel burner tray. White enamel broiler pan.

No.	Style	Oven	Gas	Weight	Each
407	RB	Right	Art.	220	$77.50
407	LB	Left	Art.	220	$77.50
407	VNRB	Right	Nat.	220	$77.50
407	VNLB	Left	Nat.	220	$77.50

Can be equipped with either Wilcolator or Detroit Jewel Heat Regulator if desired.

Can be furnished with glass door if desired, or without white porcelain splashers.

Measurements.

Floor space required with end shelf.....51x25½
Floor space required without end shelf.....48x25½
Baking oven.....18x18x12
Broiler and toasting oven.....18x18x 9
Height of cooking top.....32½
Height of high shelf.....14½
Top plate with end shelf.....28x22
Size of flue collar..... 4

No. 407 L. B.

No. 402 LB

One giant burner, three standard burners. Single valve double line oven burner. White enamel burner tray. Blue steel broiler pan.

No.	Style	Oven	Gas	Weight	Each
402	RB	Right	Art.	200	$63.00
402	LB	Left	Art.	200	$63.00
402	VNRB	Right	Nat.	200	$63.00
402	VNLB	Left	Nat.	200	$63.00

Can be equipped with Detroit Jewel Heat Regulator if desired. Can be furnished with glass door if desired or without white porcelain splashers.

Measurements.

Floor space required with end shelf.....43½x25½
Floor space required without end shelf.....40½x25½
Baking oven.....16x18x12
Broiler and toasting oven.....16x18x 9
Size of top plate.....23½x22
Height of cooking top.....32½
Height of high shelf.....14½
Size of flue collar..... 4

Any of the above Ranges can also be furnished in style "N" with closed top and cast oven bottom for natural gas at extra cost.

Detroit Jewel Cabinet Gas Ranges

No. 405 L. B.

Cast iron front frame, door frames and cooking top finished in baked ebonite. Blue steel finish. One giant burner, three standard burners. Loop oven burner. Galvanized burner tray. Blue steel broiler pan.

No.	Style	Oven	Gas	Weight	Each
405	RB	Right	Art.	200	$61.50
405	LB	Left	Art.	200	$61.50
405	VNRB	Right	Nat.	200	$61.50
405	VNLB	Left	Nat.	200	$61.50

Can also be furnished in style "N" with closed top and cast oven bottom for natural gas at extra cost.

Can be equipped with Detroit Jewel Heat Regulator if desired. Can be furnished with glass door if desired or without white porcelain splashers.

Measurements.

Floor space required....36x24
Baking oven....14x18x12
Broiler and toasting oven....14x18x 9
Size of cooking top....18¼x20¼
Height of Cooking top....32
Height of high shelf....14¼
Size of flue collar....4

Detroit Jewel Single Oven Gas Ranges

Substantially made, with steel front, cast door frame, legs and top plate. Cast parts finished in baked ebonite. Body blue steel. Has single side walls and double back wall.

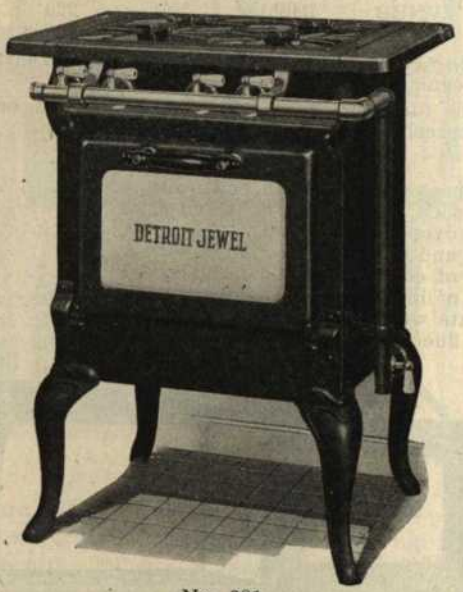
Four standard top burners. Loop oven burner with Graves lighter. Galvanized burner tray.

No.	Style	Gas	Weight	Each
381		Art.	140	$43.00
381	VN	Nat.	140	$43.00

White enamel burner tray, extra if wanted.

Measurements.

Top plate including end shelves....26½x19½
Baking oven....16x16x11
Interchangeable end shelves....3x19½
Height of cooking top....34
Size of flue collar....4



No. 381.

A special value in a three-burner range with adjustable cocks. Oven is equipped with one loop burner and Graves lighter. Has single side walls and double back wall. Three standard top burners. Cast parts finished in baked ebonite; body blue steel, drop door with enamel panel. Galvanized burner tray.

Illustration shows No. 383. Also furnished as No. 384, which is the same except includes broiler burner in top of oven.

No.	Style	Gas	Weight	Each
383		Art.	100	$32.50
383	VN	Nat.	100	$32.50
384		Art.	105	$36.00
384	VN	Nat.	105	$36.00

White enamel burner tray can be furnished at extra cost.
Canopy high shelf can be furnished at extra cost.

Measurements.

Top plate over all....28x13½
Baking oven....16x13x11
Height of cooking top....33½
Size of flue collar....3

No. 383.

Detroit Jewel Double Oven Gas Ranges

No. 382

A steel front, double back and single side-wall range. Cast door frames, legs and top plate. All cast parts finished in baked ebonite. Body blue steel.

One giant burner, three standard burners. Loop oven burner with Graves lighter for oven and broiler. Galvanized burner tray. Blue steel broiler pan.

No.	Style	Gas	Weight	Each
382		Art.	155	$49.50
382	VN	Nat.	155	$49.50

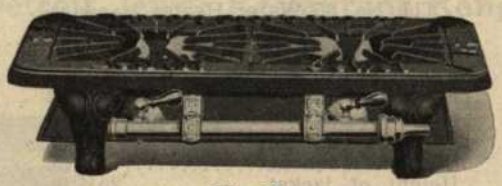
White enamel burner tray, extra if wanted.

White enamel broiler pan, extra if wanted.

Measurements.

Top plate including end shelves	26½x19½
Baking oven	16x16x11
Broiler and toasting oven	16x16x 9
Interchangeable end shelves	3x19½
Height of cooking top	34
Size of flue collar	4

Detroit Jewel Hot Plates



No. 62

This Hot Plate is made with galvanized burner tray and the same style burners as are used in our gas ranges. Has removable top grates, removable burners and adjustable sleeve cocks.

No. 62 has one standard burner and one giant burner; No. 63 is fitted with two standard and one giant burner. Giant burners will be substituted for the standard burners at additional cost. No. 62 can be furnished with legs 17½ inches high as Laundry Stove at extra cost.

No.	Style	Size of Top	Weight	Each
62	Two burner	12x22	22	$10.00
63	Three burner	12x32	30	$13.70

Detroit Jewel Cast Body Kitchen Heaters

A cast body heater with heavy cast iron firebox linings, duplex grate, gas igniter, and a large ash pit with bailed ash pan. For burning coke, hard or soft coal. Illustration shows heater attached to Gas Range No. 402. Four adjustable legs furnished. Has 6-inch flue collar. Top is extended to provide a dead air space of 1 inch at rear of heater, and rear wall is lined with asbestos. Price does not include the Gas Range shown in illustration.

	Weight	Each
No. 86—Without Gas Igniter	175	$40.00
Gas Igniter for above, extra	10	$ 6.50
Iron Water Front, extra	30	$ 7.00

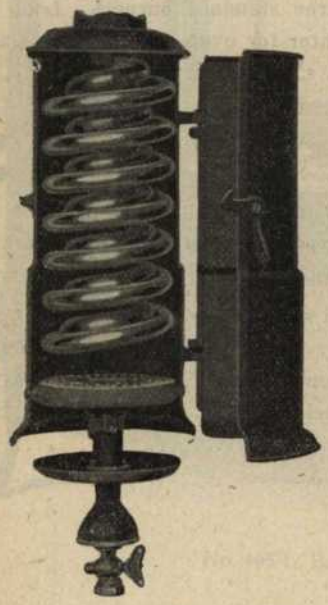
Measurements.

Height of heater (without legs)	20½
Firebox	7½x9x16
Top surface	26x12½

Legs allow adjustment of height of heater from 25 to 36 inches.

Showing No. 86 attached to No. 402 Gas Range.

Detroit Jewel Copper Coil Water Heaters

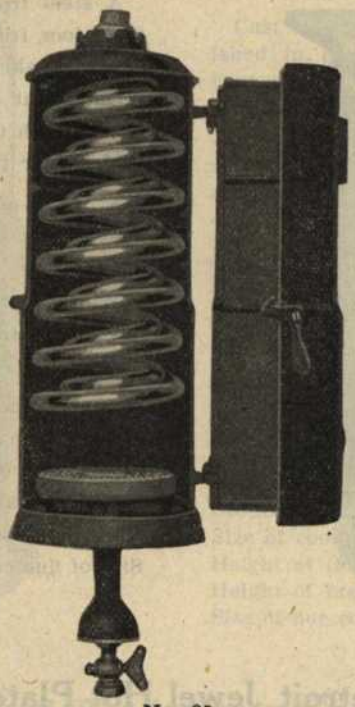


No. 25

The No. 25 Water Heater is adaptable to boilers up to 30 gallon capacity. Bottom made of heavy steel with thick japan finish, concave to catch condensation. Furnished with one deflector plate.

Diameter of jacket.....6½ in.
Height of jacket.....18 in.
Water connection.....¾ in.
Gas connection.....½ in.
Shipping weight.....28 lbs.

No. 25.....Each, $14.70

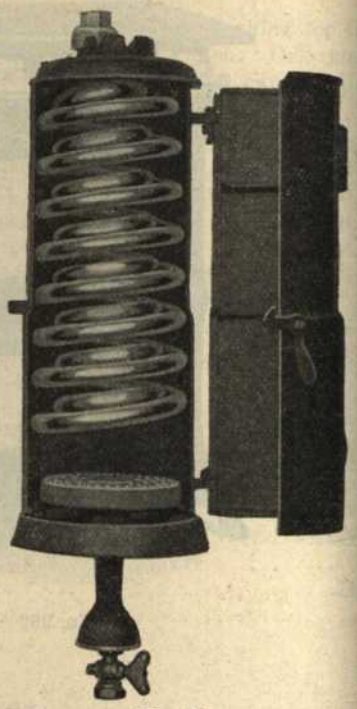


No. 35

The No. 35 Water Heater is adaptable to boilers of between 30 and 40 gallon capacity. Bottom made of cast iron, concave to catch condensation. Furnished with two deflector plates and with complete union connections for both the water inlet and outlet.

Diameter of jacket.....7 in.
Height of jacket.....20½ in.
Water connection.....¾ in.
Gas connection.....½ in.
Shipping weight.....33 lbs.

No. 35.....Each, $18.50



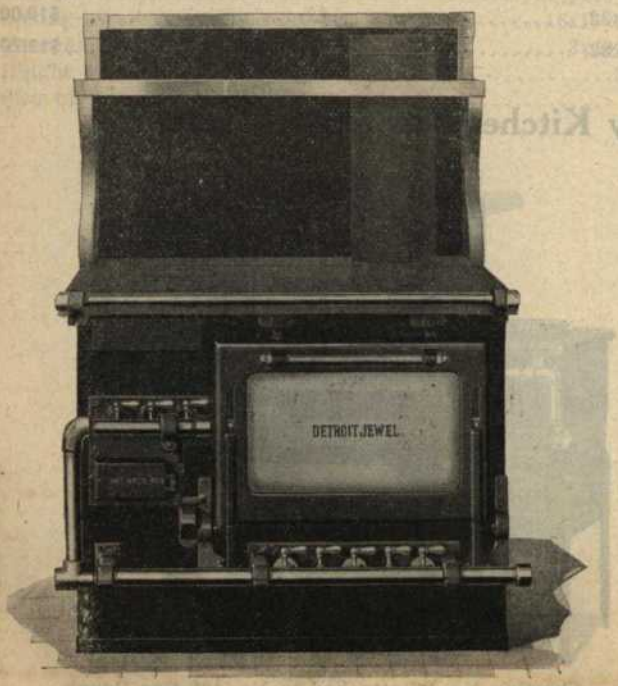
No. 45

The No. 45 Water Heater is adaptable to boilers of between 30 and 60 gallon capacity. Bottom made of cast iron, concave to catch condensation. Furnished with two deflector plates and with complete union connections for both the water inlet and outlet.

Diameter of jacket.....7 in.
Height of jacket.....20½ in.
Water connection.....¾ in.
Gas connection.....½ in.
Shipping weight.....38 lbs.

No. 45.....Each, $20.00

Detroit Jewel Hot Section Hotel Ranges



The Hot Section Hotel Range equipped with high shelf. All outer steel parts of body and high shelf are coated with air drying enamel. Cast iron parts, including oven door frame, are furnished in baked ebonite, with the exception of the door handle, which is polished wrought iron pipe. Top plate is coated with stove blacking.

No.	Style	Weight	Each
412	High Shelf	715	$339.00

When ordering, specify if wanted for artificial or natural gas.

Measurements

Floor space required.....44½x40½
Size of cooking top.....40x40
Size of Oven.....28x24x16
Height of cooking top.....32
Height of high shelf.....24
Size of flue collar.....7

Detroit Jewel Restaurant Range

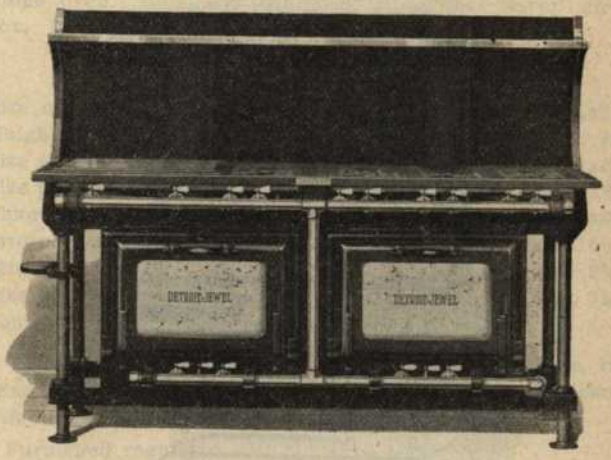
A new style restaurant, club or hotel range, built in accord with standardization specifications. Has eight top burners; four standard burners in rear and four giant burners in front combined with two loop burners under the frying or cake griddle. Baking ovens equipped with two-line burners with lighter. Furnished for artificial or natural gas. Large cake griddle to cover one-half of range top can be furnished at extra cost, or can be furnished with 12 top burners without any cake griddle if desired. Can be furnished without high shelf if desired.

No.		Gas	Weight	Each
332	Restaurant Range	Art.	625	$241.00
332 VN	Restaurant Range	Nat.	625	$241.00
	High shelf if wanted, extra		70	$ 18.50
	Large griddle if wanted, extra.			$ 3.00

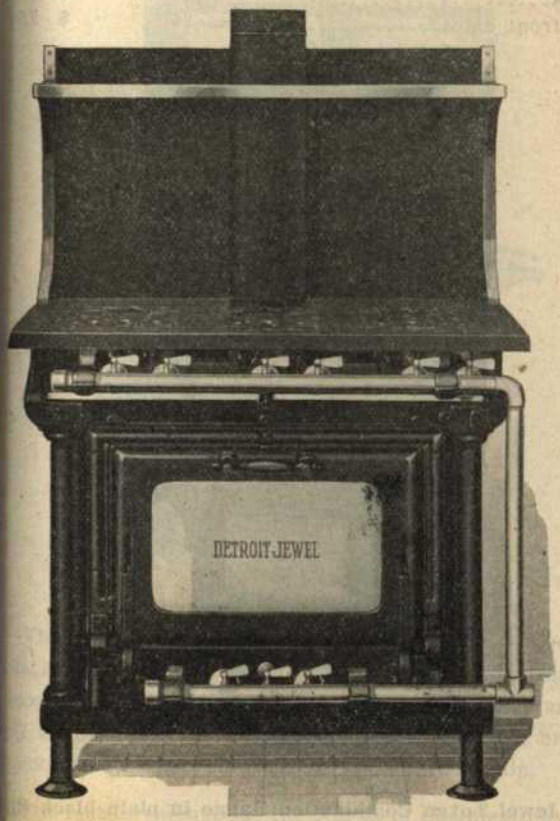
Can also be furnished in style "N" with closed top and cast oven bottoms for natural gas at small extra cost.

Measurements.

Baking ovens, each	22x20x14
Cooking top over all	28½x74
Size of small cake griddle	20x19
Size of large cake griddle	31x19
Height of cooking top	34½
Height of high shelf	21



Detroit Jewel Restaurant Range



The same as the No. 332 Restaurant Range, but with only six top burners. Has three giant burners in front and three standard burners in rear. Can be furnished with small cake griddle 19x20 inches, or large cake griddle to cover entire top at extra cost.

No.		Gas	Weight	Each
342	Restaurant Range	Art.	365	$129.50
342 VN	Restaurant Range	Nat.	365	$129.50
	High shelf if wanted, extra.		45	$ 13.50
	Large cake graddle if wanted, extra.			$ 9.00
	Small cake griddle if wanted, extra.			$ 6.00

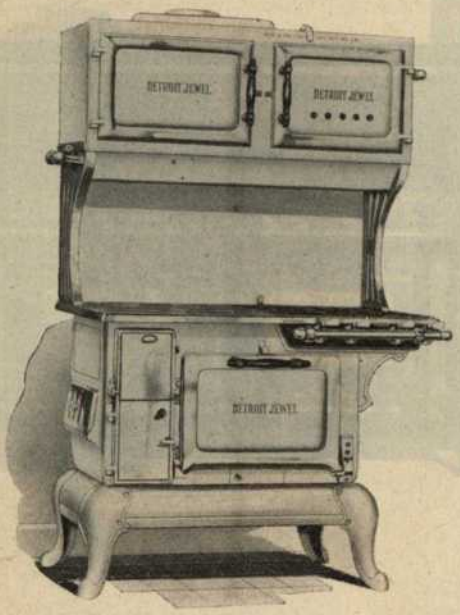
Can be furnished in style "N" with closed top and cast oven bottom for natural gas at small extra cost.

Measurements.

Baking oven	22x20x14
Cooking top over all	28½x36
Height of top plate from floor	34½
Height of high shelf	21

We can also furnish other Range Combinations for Restaurant and Hotel use, on special order from factory.

Detroit Jewel Combination Ranges



No. 68-18

Coal section has four holes on cooking top, the famous "Coal Saver" firebox, which burns the smoke and gases from soft coal, and a large square 18-inch oven (lower). Gas section has four top burners (at right), a separate 18-inch oven with loop oven burner 16-inch deep (at left, elevated section) and a full size 16-inch broiler (at right, elevated section).

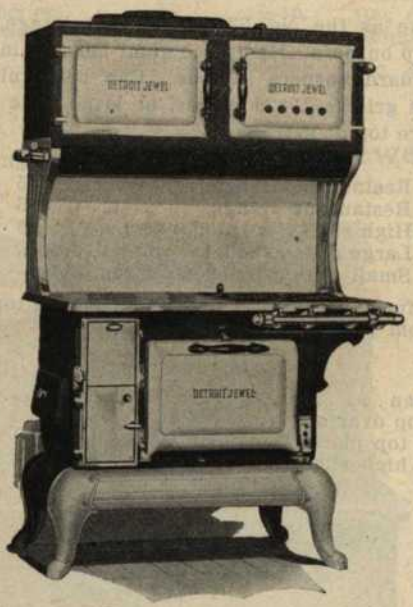
Measurements.

Size of top plate	39½x25
Height of top plate from floor	32
Size of coal oven	18x18x12
Size of gas oven	18x16x12
Size of gas broiler	16x16x12
Floor space occupied	46x36
Size of firebox for coal	16x7½x10¾
Size of firebox for wood	20x7½x 9¼
Height of baking oven bottom from floor	51¾
Overhang of elevated section	13
Four covers for coal, size	8
Distance from top plate to elevated section	15

The Jewel 2-oven Combination Range shown in "Snow-White" Porcelain Enamel finish with nickel trimmings.

The 68-18 Combination is regularly furnished with a polished top.

No.	Gas	Weight	Each
68-18	Art.	670	$275.00
68-18VN	Nat.	670	$275.00
Water front extra		25	$ 7.00

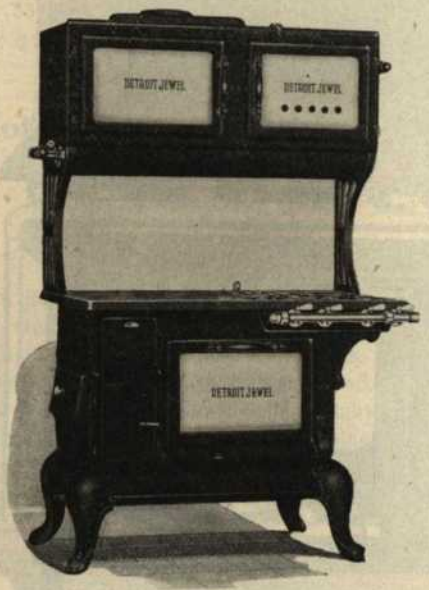


No. 66-18

The Jewel 2-oven Combination Range in black, and nickel finish. Plain top.

For details of construction and measurements see above.

No.	Gas	Weight	Each
66-18	Art.	670	$203.50
66-18VN	Nat.	670	$203.50
Water front extra		25	$ 7.00
Polished Top extra			$ 4.00



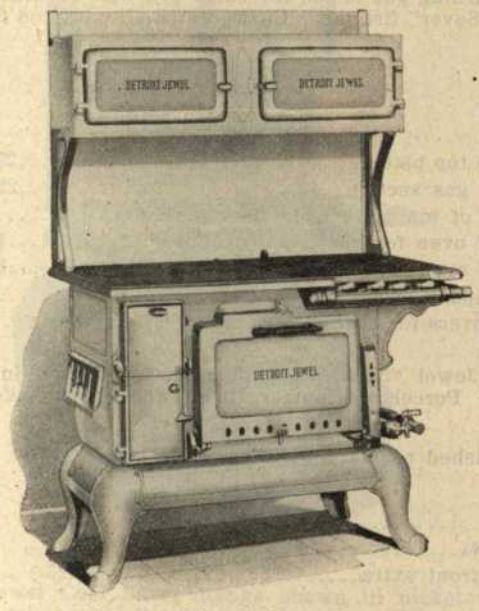
No. 67-18

The Jewel 2-oven Combination Range in plain black finish throughout, with white enamel door panels and splasher back. Plain top.

For measurements and details of construction see above.

No.	Gas	Weight	Each
67-18	Art.	670	$182.50
67-18VN	Nat.	670	$182.50
Water front extra		25	$ 7.00
Polished Top extra			$ 4.00

Detroit Jewel Combination Ranges



No. 65-18

Patent Two-in-One Oven. When the oven is arranged for burning coal the stove is exactly the same as a coal range. When the oven is arranged for burning gas it has the same principle of construction as the highest grade gas range oven. Regularly equipped with "Coal Saver" fire box. Incorporates all patented features.

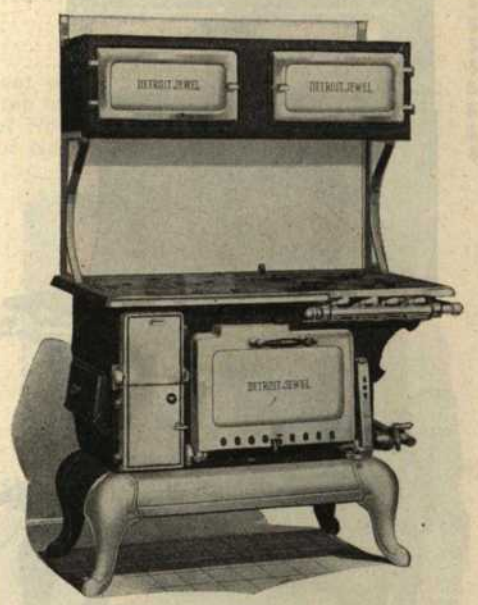
Measurements.

Size of top plate	39½x25
Height of top plate from floor	32
Size of oven for gas	18x18x10
Size of oven for coal	18x18x12½
Floor space occupied	39½x35
Size of fire-pot for coal	16x10¾
Size of fire-pot for wood	20x 9¼
Size of warming closet	38x12½x 9½
Four covers for coal size	8

The Jewel "New Way" Combination Range shown in "Snow-White" Porcelain Enamel finish and with nickel trimmings.

Furnished regularly with polished top.

No.	Style	Gas	Weight	Each
65-18	E	Art.	450	$235.50
65-18VN	E	Nat.	450	$235.50
Water front extra			25	$ 7.00
Deduct for No. 540 Closet				$ 46.00



No. 63-18

The Jewel "New Way" Combination Range shown in black and nickel finish with white porcelain splasher and door panels. Has 3-piece nickel base, nickel fire and ash-pit doors, nickel door frames, nickel high closet brackets, back-guard corners and gas manifold. Plain top.

For measurements see the No. 65-18 Combination Range.

No.	Style	Gas	Weight	Each
63-18	E	Art.	440	$176.00
63-18VN	E	Nat.	440	$176.00
Water front extra			25	$ 7.00
Polished Top extra				$ 4.00
Deduct for No. 340 Closet				$ 31.00

No. 64-18

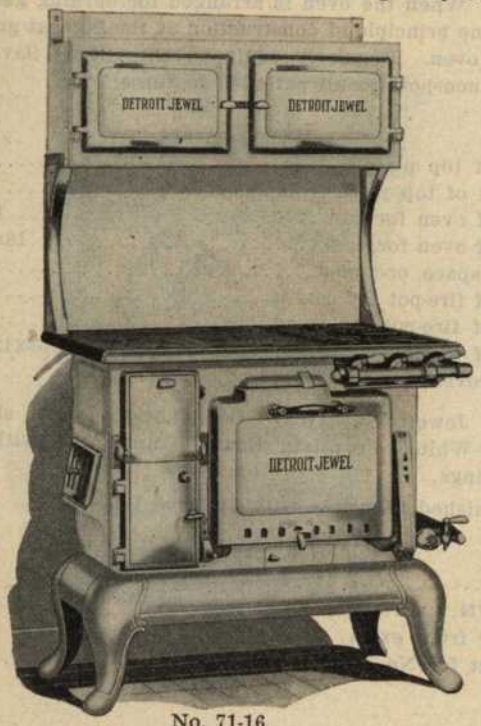
The Jewel "New Way" Combination Range shown in plain black finish with white porcelain splasher and door panels. Plain top.

For measurements see No. 65-18 Combination Range.

No.	Style	Gas	Weight	Each
64-18	E	Art.	440	$151.00
64-18VN	E	Nat.	440	$151.00
Water front extra			25	$ 7.00
Polished Top extra				$ 4.00
Deduct for No. 240 Closet				$ 24.00

Detroit Jewel Combination Ranges

These Ranges are the same as No. 65-18 except have only three gas burners instead of four, and 16 inch oven in place of 18 inch. Equipped with Patent Two-In-One Oven. When the oven is arranged for burning coal the stove is exactly the same as a coal range. When the oven is arranged for burning gas it has the same principle of construction as the highest grade gas range oven. Regularly equipped with "Coal Saver" fire box. Incorporates all patented features.



No. 71-16

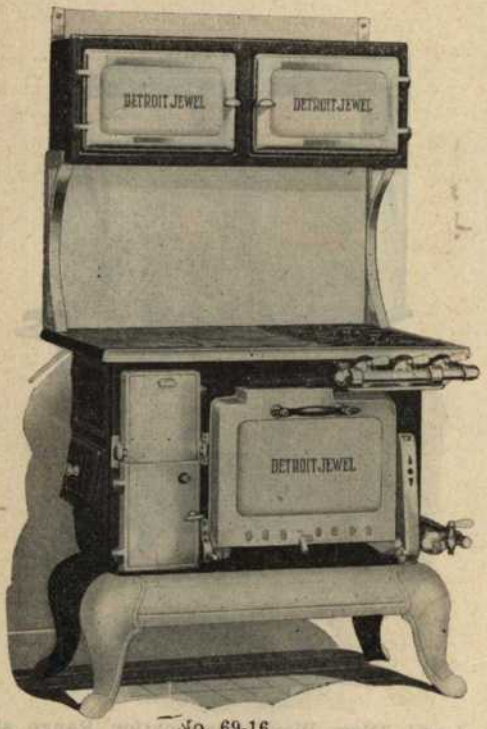
Measurements.

Size of top plate	25½x32
Size of gas section	23½x10½
Height of top plate from floor	32
Size of oven for gas	16x16x10
Size of oven for coal	16x16x12
Floor space occupied	35x32
Four covers for coal, size 8.	

The Jewel "New Way" Combination shown in "Snow White" Porcelain Enamel finish and with nickel trimmings.

Furnished regularly with polished top.

No.	Style	Gas	Weight	Each
71-16	E	Art.	410	$200.00
71-16VN	E	Nat.	410	$200.00
Water front extra			25	$ 7.00

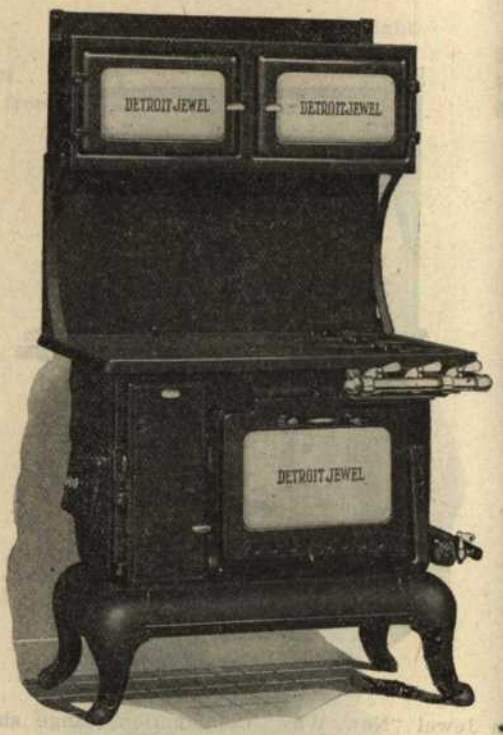


No. 69-16

The Jewel "New Way" Combination Range shown in black and nickel finish with white porcelain splasher and door panels; has three-piece nickel base, nickel fire and ash-pit door, nickel door frames, nickel high closet brackets, back guard corners and gas manifold. Plain top.

For measurements see the No. 71-16 Combination Range.

No.	Style	Gas	Weight	Each
69-16	E	Art.	405	$150.00
69-16VN	E	Nat.	405	$150.00
Water front extra			25	$ 7.00
Polished top extra				$ 4.00
Deduct for No. 331 Closet				$ 26.50



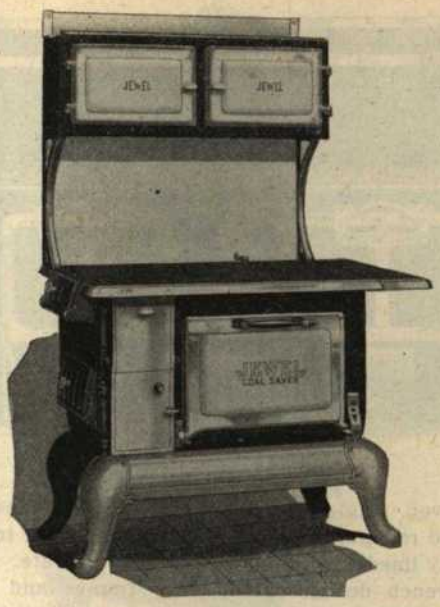
No. 70-16

The Jewel "New Way" Combination Range shown in plain black finish with white porcelain door panels. Plain top.

For measurements see the No. 71-16 Combination Range.

No.	Style	Gas	Weight	Each
70-16	E	Art.	405	$130.00
70-16VN	E	Nat.	405	$130.00
Water front extra			25	$ 7.00
Polished top extra				$ 4.00
Deduct for No. 131 High Closet				$ 16.50

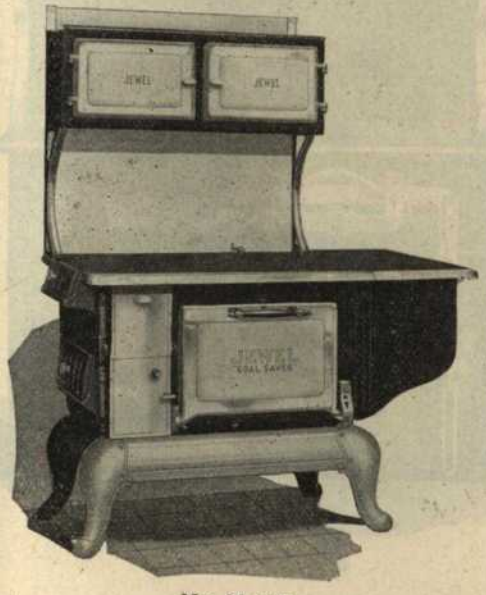
Jewel "Coal Saver" Ranges



No. 20-18E

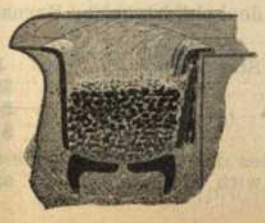
The Jewel Coal Saver Range shown in nickel finish. Polished top extra. Pyrex glass door extra. Can be furnished with reservoir as shown below as Nos. 20-18F and 20-20F.

No.	Covers	Oven	Top	Each
20-18E.	6-8 in.	18x18x12	38½x24¾	$143.00
20-20E.	6-8 in.	20x20x12	40½x26¾	$157.50
20-18F.	6-8 in.	18x18x12	45½x24¾	$164.50
20-20F.	6-8 in.	20x20x12	47¼x26¾	$175.50
Water front extra.				$ 7.00
Polished top extra.				$ 4.00
Deduct for No. 231 Closet.				$ 26.50
Deduct for No. 234 Closet.				$ 27.50



No. 20-18F

This illustrates the 20-18 Series with reservoir. For measurements see above.



No. 19-18E

The Jewel "Coal Saver" Range shown in plain finish in end shelf style and with nickel oven door frame, guard rail, and journals. Can be furnished without white enamel splasher if desired. Can be furnished with reservoir as shown below as Nos. 19-18F and 19-20-F.

No.	Covers	Oven	Top	Each
19-18E.	6-8 in.	18x18x12	38½x24¾	$128.50
19-20E.	6-8 in.	20x20x12	40½x26¾	$139.00
19-18F.	6-8 in.	18x18x12	45½x24¾	$150.00
19-20F.	6-8 in.	20x20x12	47¼x26¾	$161.00
Water front extra.				$ 7.00
Polished top extra.				$ 4.00
3 Piece Nickel Base, extra.				$ 5.00
Deduct for No. 231 Closet.				$ 20.00
Deduct for No. 234 Closet.				$ 21.00

No. 19-18-F

This illustrates the 19-18 Series with reservoir. For measurements see above.

More Heat From the Fuel

This illustrates the "Coal Saver" Fireback which produces 100° more heat from fuel. It feeds the necessary preheated air to the fire to cause the most complete combustion of the gases liberated from the burning fuel and produce the most intense heat. The greatest heating value of the fuel is obtained—it does not escape into the chimney flue.

Result Jewel Cast Ranges

No. 86-18E

The Result Jewel Cast Range is shown in plain black with end shelf (illustrated with reservoir below). White porcelain oven door panel and warming closet door panels. Polished top can be furnished at extra cost.

Burns hard coal, soft coal, coke or wood.

No.	Covers	Oven	Top	Each
86-18E	6-8 in.	17¾x16x11¼	27x38	$ 98.00
Water front extra				$ 7.00
Polished Top extra				$ 4.00
3-Piece Nickel Base extra				$ 5.00
Deduct for No. 131 Closet				$ 16.50

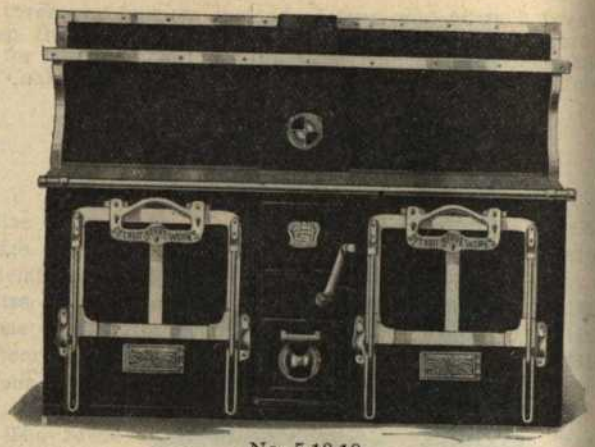
No. 86-18F

The Result Jewel Cast Range is shown in plain black with reservoir (illustrated with end shelf above). White porcelain oven door panel and warming closet door panels. Polished top can be furnished at extra cost.

Burns hard coal, soft coal, coke or wood.

No.	Covers	Oven	Top	Each
86-18F	6-8 in.	17¾x16x11¼	27x43	$117.50
Water front extra				$ 7.00
Polished top extra				$ 4.00
3-Piece Nickel Base extra				$ 5.00
Deduct for No. 131 Closet				$ 16.50

Jewel Hotel Steel Ranges



No. 5-18-18

A two-oven, single fire hotel range that provides a large baking and roasting capacity, and large cooking top. Firebox heavily lined and equipped with duplex grate. Cooking top of French design. Oven door frames and hangers made from malleable iron. Illustrated with single deck high shelf. Burns hard coal, soft coal or coke.

No.	Size of Each Oven	Size of Top	Weight	Each
5-18-18	18x28x16	63x39	1130	$367.00
Single deck high shelf, extra			80	$ 21.00
U. water heater, extra			65	$ 16.50

Can be furnished in batteries of as many sections as desired or combined with the No. 5-23.

No. 5-23

A single oven, single fire range of the most improved type. Has extra heavy French top, heavily lined firebox and large oven with malleable iron door frame and hangers. Illustrated with single deck high shelf. Burns hard coal, soft coal or coke.

No.	Size of Oven	Size of Top	Weight	Each
5-23	23x28x16	48x39	960	$271.00
Single deck high shelf, extra			80	$ 18.50
U. water heater, extra			65	$ 16.50

Can be furnished in batteries of as many sections as desired or can be combined with the No. 5-18-18 or gas sections.

Jewel Hot Blast Heater

A medium priced Hot Blast Heater possessing every essential feature. Built for burning practically any fuel, including soft coal, slack or siftings. Complete with ashpit, ashpan, poker and shaker. Note the draft door set in the ashpit door, a new feature which makes the shaking of ashes possible without dust. This feature not furnished on the No. 414 size. No. 414 is furnished only with nickeled steel round screw draft in ashpit door.

No.	Diameter of Body	Weight	Each
414.	14 inches	110	$39.00
416.	16 inches	130	$43.00
418.	18 inches	165	$50.00

Novel Jewel Hot Blast Oak Heater

This Novel Oak Heater, illustrated, is regularly furnished with nickel side wings, swing cover, reflector, top and firepot bands and handsomely ornamented, nickeled urn and has hotblast ring.

No.	Diameter of Body	Weight	Each
14.	14 inches	130	$45.50
16.	16 inches	175	$54.00
18.	18 inches	195	$63.00

Feeder can be furnished at extra cost.

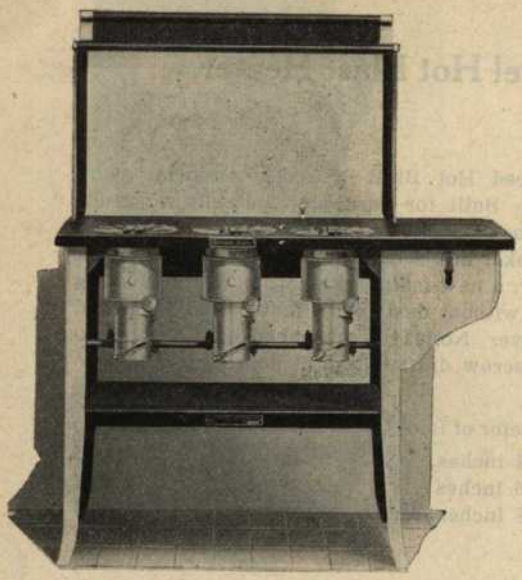
Novel Jewel Oak Heater

The Novel Jewel Oak Heater, without nickeled side wings and swing cover, without hotblast ring. This style Novel Jewel retails at a price which makes it a popular seller wherever introduced. It is sold to the trade at the lowest price at which a well made, well mounted, satisfaction giving heater of this kind can be offered.

No.	Diameter of Body	Weight	Each
814.	14 inches	105	$35.70
816.	16 inches	130	$42.00
818.	18 inches	160	$49.00

Feeder can be furnished at extra cost.

Detroit Jewel Oil Ranges



No. 33 With No. 333 High Shelf

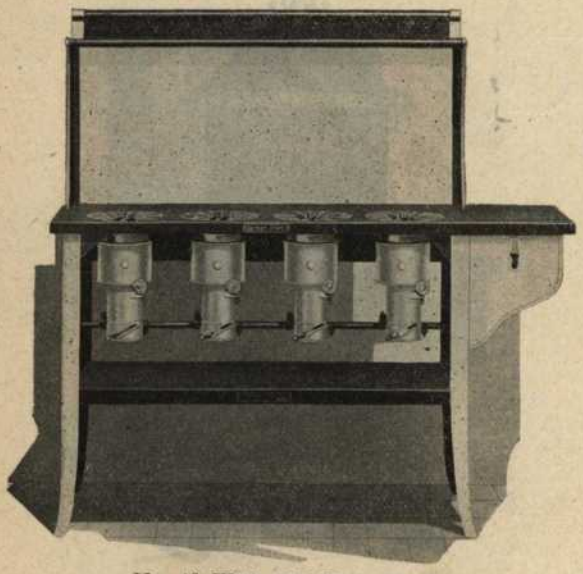
Detroit Jewel three-burner Oil Range illustrated with front legs and cheek white enameled, balance of the range being finished in baked ebonite.

No. 332 High Shelf (without white enamel splasher) can be furnished if desired.

Measurements.

Size of top plate.....44x20
Height of cooking top.....31¼
Height of high shelf.....18
Shipping weight, range only.....78 lbs.
Shipping weight, high shelf only.....23 lbs.

No. 33 With No. 333 High Shelf.....Each, **$46.50**
No. 33 Without No. 333 High Shelf.....Each, **$33.00**



No. 43 With 423 High Shelf

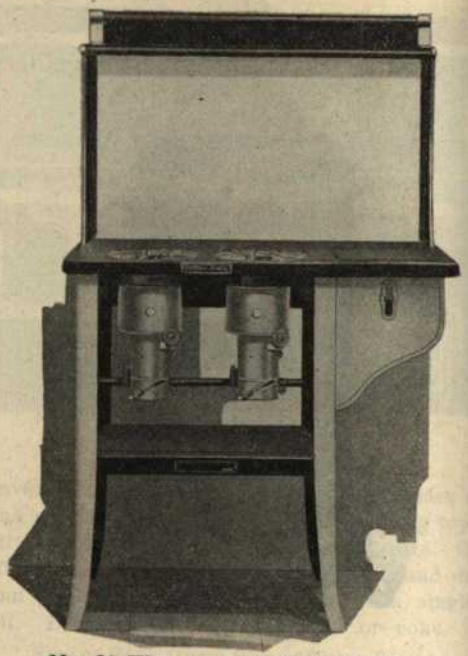
Detroit Jewel four-burner Oil Range illustrated with two front legs and cheek white enameled, balance of range finished in baked ebonite.

No. 422 High Shelf (without white enameled splasher) can be furnished if desired.

Measurements.

Size of top plate.....53½x20
Height of cooking top.....31¼
Height of high shelf.....18
Shipping weight, range only.....95 lbs.
Shipping weight, high shelf only.....28 lbs.

No. 43 with No. 423 High Shelf.....Each, **$56.50**
No. 43 without No. 423 High Shelf.....Each, **$41.00**



No. 23 With No. 333 High Shelf

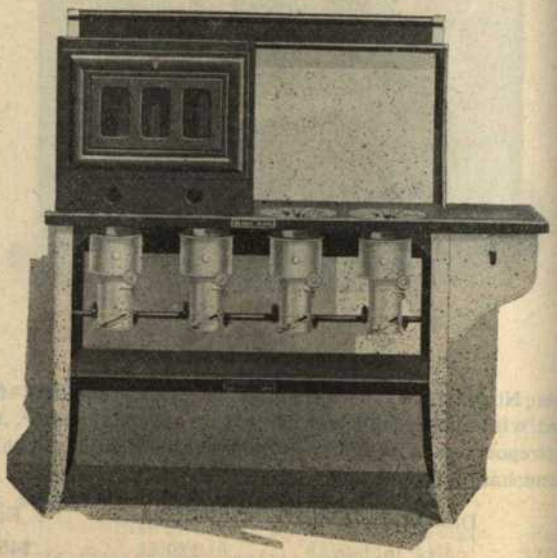
Detroit Jewel two-burner Oil Range illustrated with front legs and cheek white enameled, balance of the range being finished in baked ebonite.

No. 332 High Shelf (without white enameled splasher) can be furnished if desired.

Measurements.

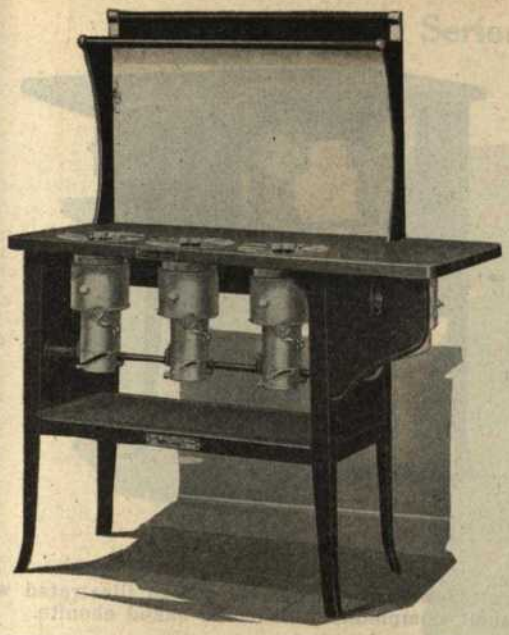
Size of top plate.....34x20
Height of cooking top.....31¼
Height of high shelf.....18
Shipping weight, range only.....60 lbs.
Shipping weight, high shelf only.....23 lbs.

No. 23 with No. 333 High Shelf.....Each, **$40.50**
No. 23 without No. 333 High Shelf.....Each, **$27.00**



This illustrates the No. 43, 4 burner Detroit Jewel Oil Range with 2 burner oven, and indicating the large capacity of the top. For prices on Ovens see page 405.

Detroit Jewel Oil Ranges



No. 32 with 333 High Shelf

Detroit Jewel three-burner Oil Range illustrated completely finished in baked ebonite.
No. 332 High Shelf (without white enameled splasher) can be furnished if desired. See opposite column.

Measurements.

Size of top plate	44x20
Height of cooking top	31¼
Height of high shelf	18
Shipping weight, range only	78 lbs.
Shipping weight, high shelf only	23 lbs.

No. 32 with No. 333 High Shelf and White Splasher. . . . . Each, $44.50

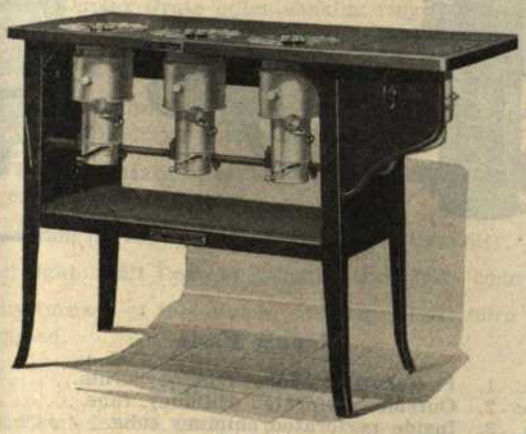
No. 32 with 332 High Shelf

Detroit Jewel three-burner Oil Range illustrated completely finished in baked ebonite.
No. 333 High Shelf (with white enameled splasher) can be furnished if desired. See opposite column.

Measurements.

Size of top plate	44x20
Height of cooking top	31¼
Height of high shelf	18
Shipping weight, range only	78 lbs.
Shipping weight, high shelf only	23 lbs.

No. 32 with No. 333 High Shelf and Black Splasher. . . . . Each, $39.00



No. 32

Detroit Jewel three-burner Oil Range illustrated without high shelf, completely finished in baked ebonite.
No. 332 High Shelf (without white enamel splasher) and No. 333 High Shelf (with white enamel splasher) can be furnished if desired. See above.

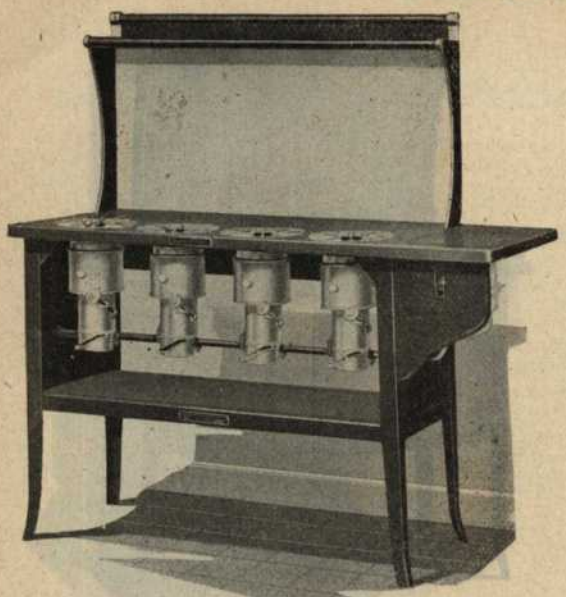
Measurements.

Size of top plate	44x20
Height of cooking top	31¼
Height of high shelf	18
Shipping weight, range only	78 lbs.

No. 32 without High Shelf. . . . . Each, $31.00

This illustrates the big top, just what the housewife wants. Lots of room on the rear of the top to keep food warm and place vessels and pans without interfering with the operation of any of the burners.

Detroit Jewel Oil Ranges



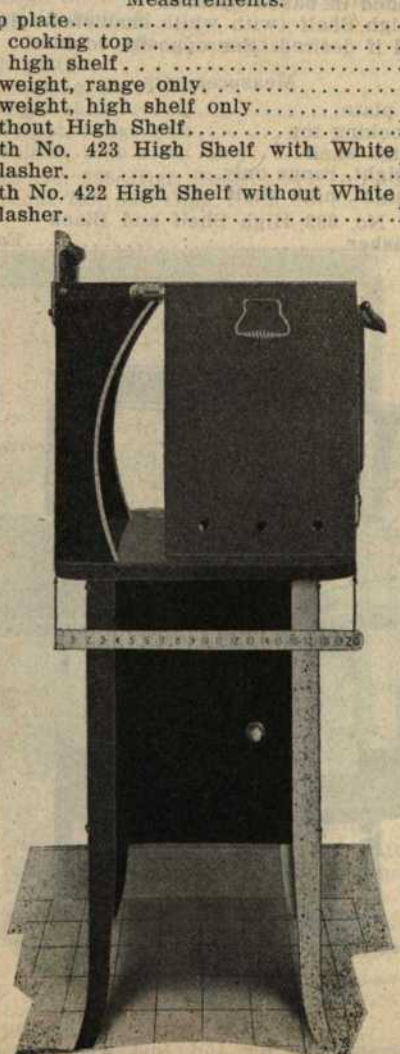
No. 42 with 423 High Shelf

Detroit Jewel four-burner Oil Range illustrated completely finished in baked ebonite.

No. 422 High Shelf (without white enameled splasher) can be furnished if desired.

Measurements.

Size of top plate.....53½x20
Height of cooking top.....31¼
Height of high shelf.....18
Shipping weight, range only.....95 lbs.
Shipping weight, high shelf only.....28 lbs.
No. 42 without High Shelf.....Each, $39.00
No. 42 with No. 423 High Shelf with White Splasher.....Each, $54.50
No. 42 with No. 422 High Shelf without White Splasher.....Each, $48.00



The view above shows the unusual depth (20 inches) of the cooking top, which permits baking ovens to set properly on the burners without extending under the shelf.

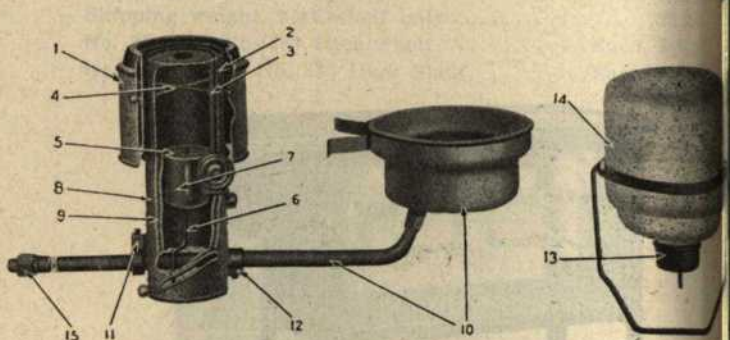
No. 22

Detroit Jewel two-burner Oil Range illustrated without high shelf, completely finished in baked ebonite.

No. 333 High Shelf (with white enameled splasher) or No. 332 High Shelf (without white enameled splasher) can be furnished if specified.

Measurements.

Size of top plate.....34x20
Height of cooking top.....31¼
Height of high shelf.....18
Shipping weight, range only.....60 lbs.
Shipping weight, high shelf only.....23 lbs.
No. 22 without High Shelf.....Each, $25.00
No. 22 with No. 333 High Shelf with White Splasher.....Each, $38.50
No. 22 with No. 332 High Shelf without White Splasher.....Each, $33.00

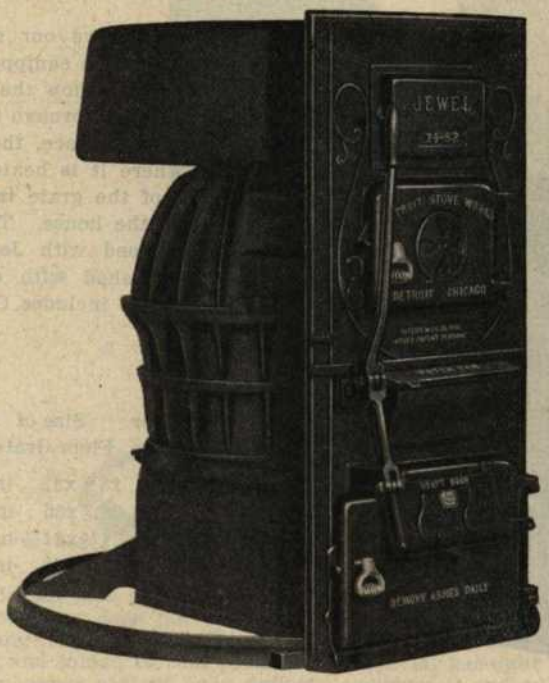


Repair Parts

No. 1. Porcelain enameled chimney drum.
No. 2. Outside perforated chimney tube.
No. 3. Inside perforated chimney tube.
No. 4. Rods for chimney drums.
No. 5. Wick stop.
No. 6. Rod for raising chimney drums.
No. 7. Air distributor.
No. 8. Wick tube or burner.
No. 9. Wick. (See Index.)
No. 10. Supply pipe with sub-tank complete.
No. 11. Burner clamp—large.
No. 12. Burner clamp—small.
No. 13. Cap for oil reservoir.
No. 14. Oil reservoir (glass) with bail.
No. 15. Cap for supply pipe.

We can furnish repair parts for all Stoves, Ranges, etc. Prices on application.

No. 24-50 Series Jewel Coal Saver Furnaces



This series is all cast-iron construction with heavily ribbed two-section firepot, which eliminates all danger of cracking by allowing for contraction and expansion. Jewel Tongue and Grove Joint between sections.

Seamless Smoke Collar projects through casing, making leakage of smoke impossible inside casing.

Smoke Flue large to permit free passage of smoke to chimney, easy to clean out because it projects through casing.

The Combustion Dome at base is wider than firepot at top. This gives needed air over the fire to cause perfect combustion.

Jewel Duplex Grate outer shaking ring makes it possible to clear the sides of firepot of ashes. This puts the hottest part of fire next to casting, giving increased heating capacity.

The Jewel Ash Pit is large and square. A feature always appreciated by the home owners.

Oversize Seamless Radiator. This is a vital point as proper size gives perfect radiation. Heat must circulate entirely around Radiator before taken into chimney.

A special feature of all Jewel Furnaces is a large fire door which permits the passage of largest size shovel or large piece of wood.

Location of Vapor Pan insures proper humidity.

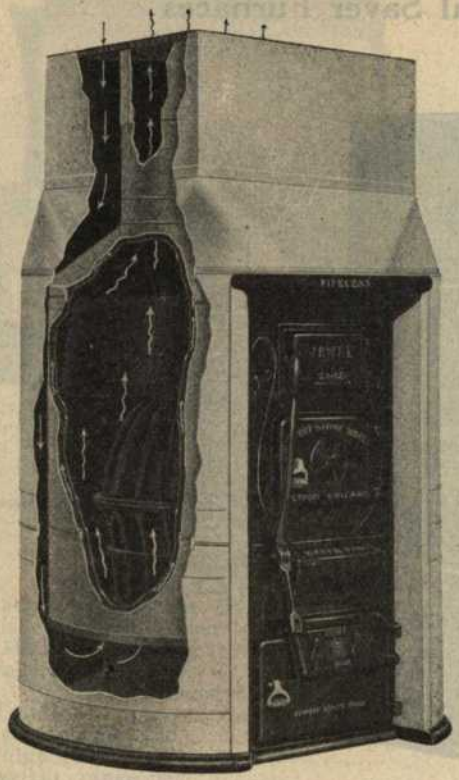
Air-tight Draft Door in ashpit makes draft control easy.

Any furnace of this series will successfully burn hard coal, soft coal or coke. Made in six sizes. Heating capacity guaranteed.

No.	Diameter	Capacity	Each
24-50	18 inches	7 to 10,000 cubic feet	$166.00
Casing Extra for No. 24-50			$ 26.50
24-51	21 inches	10 to 14,000 cubic feet	$182.50
Casing Extra for No. 24-51			$ 28.50
24-52	23 inches	14 to 17,000 cubic feet	$200.50
Casing Extra for No. 24-52			$ 30.50
24-53	26 inches	17 to 22,000 cubic feet	$234.00
Casing Extra for No. 24-53			$ 33.00
24-54	29 inches	22 to 27,000 cubic feet	$293.00
Casing Extra for No. 24-54			$ 38.50
24-55	32 inches	27 to 35,000 cubic feet	$376.00
Casing Extra for No. 24-55			$ 43.50

This furnace is also made with steel radiator in Nos. 24-60 to 24-65, inclusive. Construction and dimensions exactly the same as the furnace above except with steel radiator. This furnace recommended for hard coal only. Prices on application.

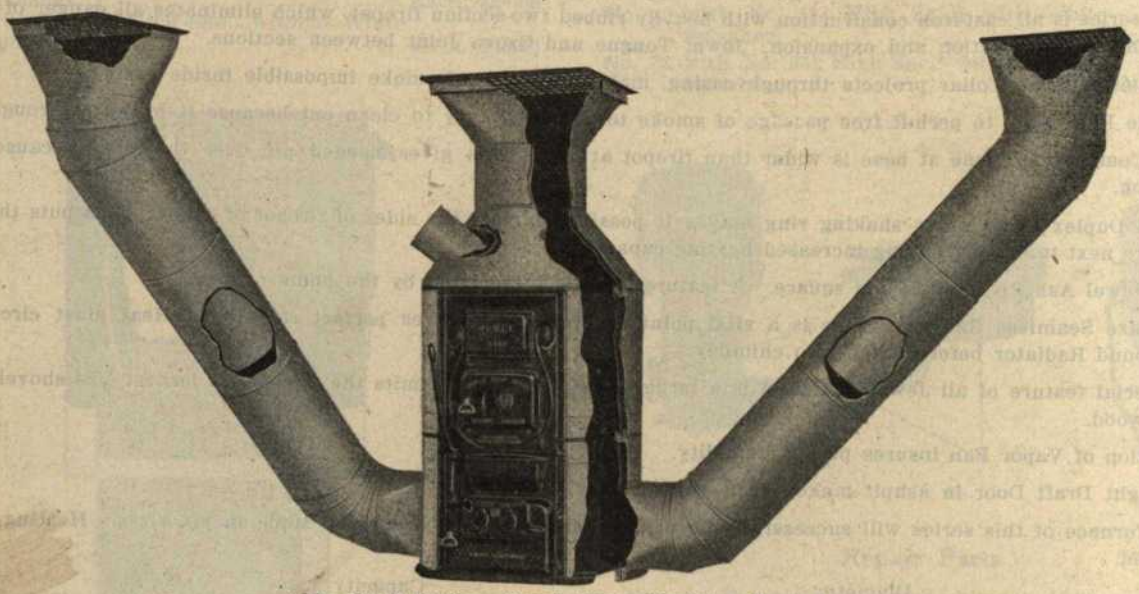
No. 24-50 Series Jewel Pipeless Furnaces Complete With Casing



This view shows our regular No. 24-50 Series Jewel Warm Air Furnace equipped with pipeless furnace casing, cut away to show how the cold air is drawn in at the top, passes downward through the cold-air chamber clear to the bottom of the furnace, then upward through the heating chamber where it is heated and finally expelled through the center of the grate into the room and distributed to all parts of the house. This series is obtainable in four sizes. Equipped with Jewel duplex grate and shaking device. -Furnished with either Black or Oxidized Face Register. Price includes Casing but not Smoke Pipe.

No.	Diameter Firepot	Size of Floor Grate	Guaranteed Heating Capacity Cubic Ft.	With Black Face Register Each	With Oxidized Face Register Each
24-50	18-in.	28 x32 -in.	10 to 15,000	$252.50	$265.50
24-51	21-in.	28 x36 -in.	15 to 21,000	$281.00	$295.50
24-52	23-in.	34½x34½-in.	21 to 26,000	$314.00	$330.50
24-53	26-in.	39 x39 -in.	26 to 32,000	$354.00	$374.50

No. 24-70 Series Jewel Three Register System Furnaces

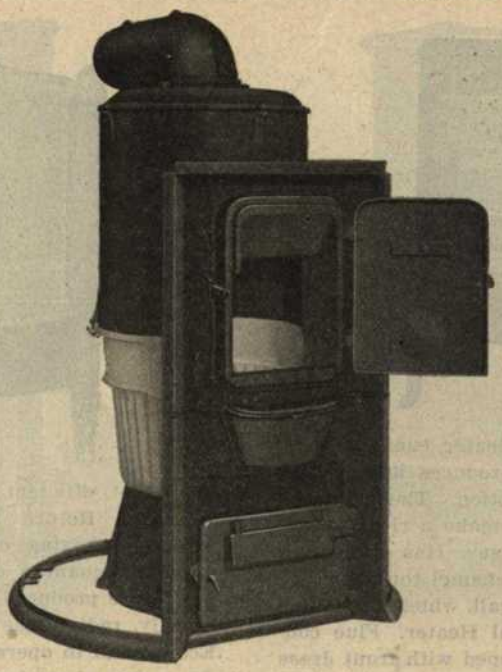


No. 24-70 Series—Jewel Three-Register System

The Jewel Three-Register System, as shown in illustration above, is designed to combine the many advantages of the pipe furnace with those of the pipeless furnace. Many times with a pipeless furnace installation, certain rooms become airbound, and as a result, difficult to heat. But with these two cold-air returns, a constant air circulation is brought about, making it possible to heat these rooms with ease. This outfit regularly includes the furnace proper complete with casing and register, 4 special boots for upper and lower ends of cold air pipes, 4 elbows and 2 cold air registers, complete except the straight pipe for cold air, which can also be furnished at an extra cost. The heating unit is the regular 24-50 Series. Black registers.

No.	Diameter of Firepot	Diameter Casing	Size Warm Air Register	Size Cold Air Faces	Guaranteed Heating Capacity, Cubic Ft.	Each
24-70	18 in.	36	24x28	16x20	10,000 to 15,000	$266.00
24-71	21 in.	40	24x28	16x20	15,000 to 21,000	$293.50
24-72	23 in.	44	28x32	18x22	21,000 to 26,000	$328.50
24-73	26 in.	48	28x32	18x22	26,000 to 32,000	$361.00
Cold Air Pipe, 16-in.						Foot, $ 1.30
Cold Air Pipe, 18-in.						Foot, $ 1.50
Cleanout Door and Frame for Turning Radiator						Extra, $ 2.00
Water Coils.						Extra, $ 4.00

No. 24-40 Series Jewel Furnaces



This Jewel Furnace is built in one size only and is, therefore, intended for use in heating small houses, stores, bungalows, cottages, etc., where the capacity does not exceed eight to ten thousand cubic feet. Grate will burn all fuels.

Large ash pit, annular shaking ring grate, revolving on roller bearings with a draw center; deep and heavy firepot; body made of heavy gauge steel and joined to cast parts with a special gas-tight joint, making it leak-proof. A cast diaphragm 16 inches in diameter in upper part of body deflects combustion and adds to radiation.

No.	Diameter of Firepot	Heating Capacity Cu. Ft.	Each
24-40	19 in	8,000 to 10,000	$103.50
Casing extra			$ 30.00
Water Coils extra			$ 4.00

No. 24-41 Series Jewel Pipeless Furnaces

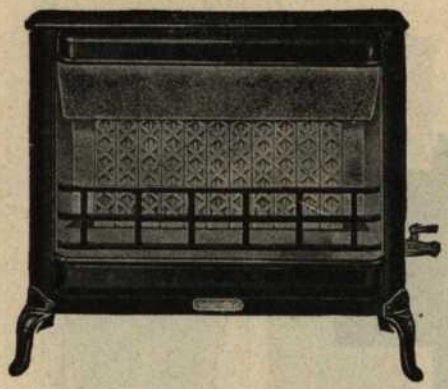
This Jewel Pipeless Furnace is built in one size only, to be put in small houses, stores, bungalows, cottages, etc., where the total capacity does not exceed ten to twelve thousand cubic feet, and in dwellings where a good circulation can be obtained from room to room through doors, archways, open stairways, etc. Grate will burn all fuels.

Description of No. 24-40 Pipe Furnace applies to No. 24-41 Pipeless Furnace also.

Furnished with either Black or Oxidized Face Registers.

No.	Diameter of Firepot	Heating Capacity Cu. Ft.	With Black Face Register Each	With Oxidized Face Register Each
24-41	19 in	10,000 to 12,000	$178.50	$191.00
Water Coils				Extra, $ 4.00

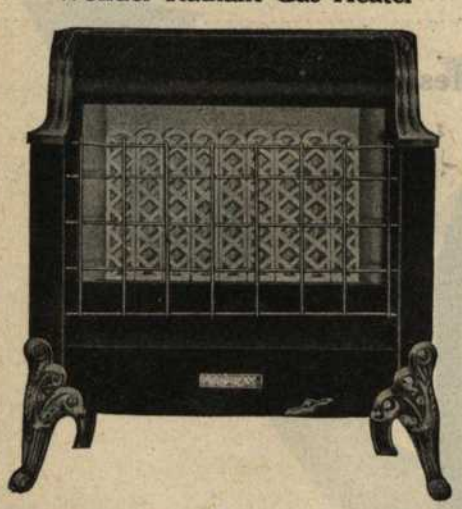
Wonder Radiant Gas Heater



A very satisfactory and economical Heater, equipped with Adjustable Valve and Mixer, which produces hottest fire possible with minimum gas consumption. The Radiants and aluminum Reflector construction make a rich, beautiful reflection. Burns on low pressure gas. Has connection for pipe or tubing. Made with white enamel top Deflector Plate and Asbestos Composition Backwall, which intensifies the heat radiating from this powerful Heater. Flue connection may be used if desired. Equipped with front dress guard, black enamel. Packed 1 in a box.

No.	Radiants	Width	Height	Depth	Weight, Lbs.	Each
807	7	16	21	9	18	$22.00
809	9	20	21	9	20	$26.50
811	11	23	22	9	23	$32.00

Wonder Radiant Gas Heater



An inexpensive Radiant Heater, equipped with Improved Full Return Feed Cast Iron Burner, an especially constructed Radiant Heater Valve, Heavy Fire Clay Backwall with corrugated surface. Has connection for ⅜-in. pipe. This Heater has a 3-inch flue connection, while at the same time it is so constructed that flue connection is not required and it will operate with equal satisfaction and efficiency in fireplace, without connection to flue, or with flue connection out in a room. Equipped with full front dress guard, coppered wire. Packed 1 in a box.

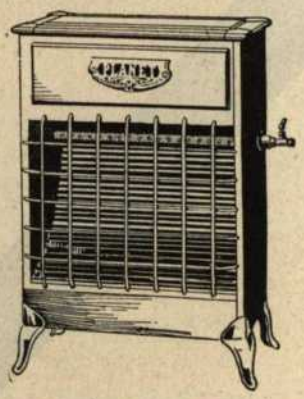
No.	Radiants	Width	Height	Depth	Weight, Lbs.	Each
607	7	17½	20	10	29	$20.00
609	9	20¼	21	10	33	$25.00
611	11	23	21	10	40	$30.00

Wonder Radiant Gas Heater

A most efficient and powerful Heater, equipped with Improved Return Feed Bunsen Burner, in which the scientific mixing of a maximum amount of air and a minimum quantity of gas is made possible. An intensely hot fire is produced. The radiants becoming incandescent quickly, radiate the heat through the space to be heated. Economical to operate. Due to perfect combustion, it produces more heat from the small quantity of gas consumed than any other Heater, and with no odor. Has connection for ⅜-in. pipe. Finished beautifully in lustrous ebony enamel, with trimmings of a highly polished brass finish. Equipped with full front dress guard, coppered wire. Packed 1 in a box.

No.	Radiants	Width	Height	Depth	Weight, Lbs.	Each
909	9	18½	21	8	52	$39.00
911	11	21	21	8	56	$43.50

Wonder Reflector Gas Heater



A dependable moderate priced Room Heater, Reflector Style, equipped with burner made with genuine Lava Orifice Tips, producing a strong illuminating flame, which is intensified and reflected into the room by the large Copper Reflector Front. Equipped with Adjustable Valve and Flue Vent, capped. Has connection for pipe or gas tubing. Rolled Top. Equipped with full dress guard, coppered wire. No. 302 packed 4 in a carton. Other numbers 1 in a carton.

No.	Width	Height	Depth	Weight, Lbs.	Each
302	12	20	8	8	$ 7.50
304	16	23	10	12	$10.30
306	20	25	11	15	$14.70
312	29	26	11	35	$19.50

All of the above Heaters are furnished for either Natural or Artificial Gas. On open orders we ordinarily ship for Natural Gas, depending somewhat on location of customer.

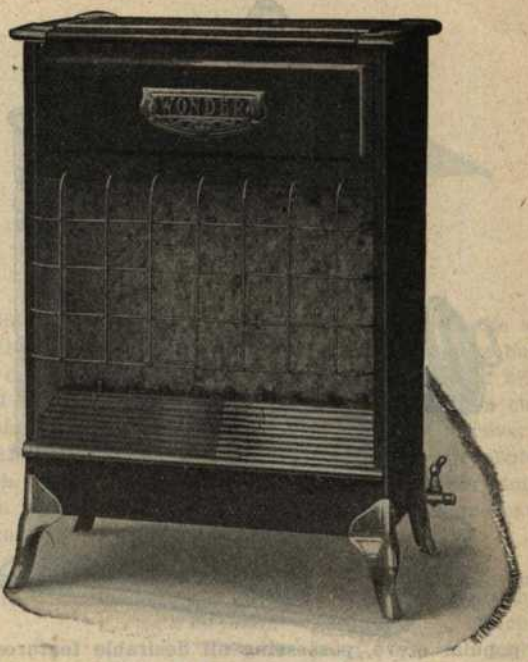
Wonder Bunsen Gas Heater

A strictly high grade, superior heating stove. Wonderful fire glow effect by the use of asbestos covered columns in the backwall construction. Highly polished Copper Reflector and Sidewalls. The Bunsen Tube Burner Construction makes this heater an unexcelled appliance for economical, efficient heating service. Nickel-Plated Legs, Name Plate, Corner Ornaments, Valve and Front Corner Strips. This unique, highly finished stove, with columned backwall, makes, when lighted, a powerful heat radiation.

Made of Keystone Copper Steel, wear and rust-resisting material, with cold air induction Backwall and Adjustable Valve. Rolled top with ornamental punching. Top and front body parts are paneled. Equipped with flue vent and connections for either pipe or tubing on valve. Has dress guard. Packed 1 in a carton.

No.	Width	Height	Depth	Burner Tubes	Weight, lbs.	Each
100.	16	23	10	6	17	$14.70
120.	18	24	11	8	18	$17.20
150.	22	26	11	10	25	$21.20
200.	29	26	11	15	40	$26.50

Wonder Bunsen Gas Heater



The popular Bunsen Tube Burner Heater in an inexpensive design. Its superior construction gives to the users the highest efficiency and utmost satisfaction obtainable in a low priced article. Air induction backwall takes cold air off the floor and inducts through openings in backwall into gas flame. This intensifies the heat and eliminates odors from products of combustion. Made of Keystone Copper Steel, wear and rust-resisting metal. Asbestos Back, Corrugated Copper Deflector and Adjustable Valve. Nickel-Plated Legs, Valve, Name Plate and Corner Ornaments. Rolled top and paneled front. Has dress guard.

Equipped with flue vent and connections for either pipe or tubing on valve.

No. 502 packed 4 in a carton. All other numbers packed 1 in a carton.

No.	Width	Height	Depth	Burner Tubes	Weight, lbs.	Each
502.	12	20	8	6	10	$ 8.00
503.	14	22	10	7	12	$ 9.20
504.	16	23	10	8	13	$11.00
505.	18	24	11	9	15	$13.20
506.	20	25	11	10	18	$15.50

Wonder Bunsen Gas Heater

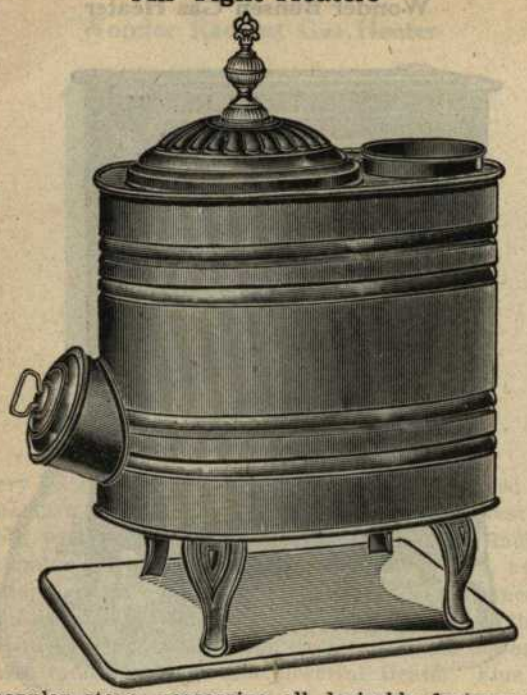
The latest model of the Bunsen Burner Type Heater combining the beauty and economy of other styles with several innovations. Black baked enamel finish. Constructed in Mission Style, with highly polished copper sides and lower front Reflector. Asbestos back. Equipped with Adjustable Valve and the famous Bunsen Burner. Connections for either pipe or tubing on valve. Has dress guard.

Packed 1 in a carton.

No.	Width	Height	Depth	Burner Tubes	Weight, lbs.	Each
706.	16	20	9	6	15	$12.50
708.	20	21	9	8	18	$15.50
710.	23	22	9	10	20	$19.20

All of the above Heaters are furnished for either Natural or Artificial Gas. On open orders we ordinarily ship for Natural Gas, depending somewhat on location of customer.

Air Tight Heaters



A popular stove, possessing all desirable features of a higher price stove. Inclined pouch to easily remove ashes. Made of uniform color blue steel. No. 018 packed 2 in crate. Nos. 22 and 26 one in a crate. No. 018 unlined. Nos. 22 and 26 lined.

Nos.	018	22	26
Length, ins.	18	22	26
Width, ins.	13	15	17
Height Stove, ins.	22	27	30
Size collars, ins.	5	6	6
Weight each, lbs.	11	22	25
Each	$3.10	$5.04	$6.14

A medium price stove. Fitted with cast iron pouch, having a swing door fitted with nickeled screw draft damper. Best quality blue steel. One in a crate. All sizes lined.

Nos.	182	202	222	242	262
Length, ins.	18	20	22	24	26
Width, ins.	13	14	15	16	17
Height Stove, ins.	22	26	27	29	30
Size collars, ins.	5	6	6	6	6
Weight each, lbs.	19	23	25	27	30
Each	$5.54	$6.44	$7.14	$7.70	$8.40

Box Heaters

A medium price box stove. Fitted with cast iron pouch inclined to easily remove ashes. Made of uniform color, blued stove steel, double seamed. Bolted and cemented air tight to cast tops and bottoms. Pit bottom. Swing top with lid cover or covers as listed in specifications below. All sizes one in a crate.

Nos.	118	122	125	128	130
Length, ins.	19¼	23¾	26	28¾	32½
Width, ins.	11	13½	15½	16½	17¼
Floor space with rails.	17¼x21	17½x25	19x28¼	20½x31¼	21x33
Height, ins.	20½	24	26	26	28
Size Collars, ins.	6	6	6	6	6
Lid Covers, ins.	1-7	2-7	2-8	2-8	2-8
Net Weight, lbs.	50	66	75	90	97
Each.	$18.00	$22.00	$25.50	$29.50	$33.00

Handy Asbestos Cement

For mounting and repairing Furnaces, Ranges, Heaters, Stoves, etc., making them gas-tight.

1-lb. can . . . . . Each, $0.20
5-lb. can . . . . . Each, $0.80
10-lb. can . . . . . Each, $1.50

For Asbestos Paper in rolls, see page No. 534.

Black Silk Stove Polish

Liquid.

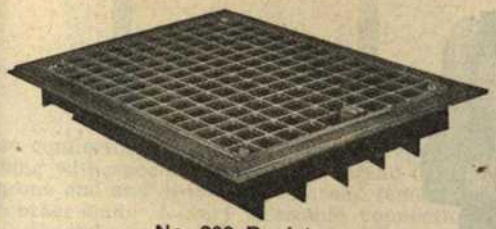
Paste.

Furnished in both liquid and paste. Paste can be mixed with Naphtha, Benzine or Gasoline.

No. 6L— 6-oz. can, Liquid . . . . . Per doz., $2.60
No. 8L—½-pt. can, Liquid . . . . . Per doz., $3.70
No. 20P—5-oz. can, Paste . . . . . Per doz., $2.40

3 dozen in a case.

Floor Registers and Register Faces



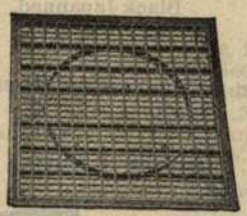
No. 200 Registers

Nos. 250J and 250W Register Faces

This is the well known Hart & Cooley line. They are made to allow the maximum circulation of air but at the same time are very strong, much in excess of actual requirements. In widths 14 in. and under, the openings are square but on larger sizes the openings are oblong. The Registers which have the opening and shutting feature have a depth of 2 5/16 in. when open and 1½ in. when closed on sizes 14x20 in. and smaller, and a depth of 5 in. when open and 3 in. when closed on larger sizes. The Register Faces do not include the opening and shutting feature but have only the Faces to cover the opening. The complete Registers are furnished in black japanned finish, as No. 200 and the Register Faces are furnished in either black japanned finish, as No. 250J, or white japanned finish, as No. 250W. We can also furnish other finishes and styles on special order and separate catalog with full information will be sent on request. The Registers are packed 2 in a carton. The Faces are wrapped in paper and packed 6 in a carton.

Size of Face Opening, Ins.	Extreme Size of Face, Ins.	Black Japanned No. 200 Registers Each	Black Japanned No. 250J Faces Each	White Japanned No. 250W Faces Each
6x 8	7 11/16 x 9 11/16	1.55	1.00	1.30
8x10	9¾x11¾	1.65	1.10	1.45
8x12	9¾x13¾	1.90	1.30	1.70
9x12	10⅞x13⅞	2.10	1.45	1.90
10x10	11 13/16 x11 13/16	2.35	1.65	2.15
10x12	11 13/16 x13 13/16	2.40	1.70	2.20
10x14	11 13/16 x15 13/16	3.15	2.20	2.85
12x12	14 1/16 x14 1/16	4.00	2.70	3.50
12x14	14 1/16 x16 1/16	4.35	2.80	3.65
12x15	14 1/16 x17	4.50	2.90	3.80
12x16	14 1/16 x18	5.60	3.50	4.60
14x16	16¼x18 5/16	8.50	4.30	6.00
14x20	16¼x22 5/16	9.50	4.80	....
16x20	18 5/16 x22 5/16	12.35	6.10	....
18x24	20 5/16 x26 5/16	21.50	8.35	....
20x24	22⅜x26⅜	22.00	8.60	....
24x24	26⅜x26⅜	30.00	12.00	....
24x30	26⅜x32⅜	38.00	17.25	....
30x30	32⅜x32⅜	49.00	21.50	....

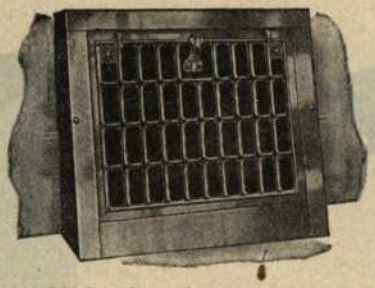
Registers for Pipeless Furnaces



These registers are for use with pipeless furnaces where both the hot and cold air pass through the same register. Made of heavy gauge steel, making them exceptionally strong, rigid and durable.

Size Grating	Size Collars	Black Japanned Each	Oxidized Copper Each
22x24	16 ins.	25.00	30.50
24x28	18 ins.	30.00	36.00
28x28	20 ins.	37.00	43.00
30x30	22 ins.	39.00	45.00
30x36	24 ins.	43.50	52.00
36x36	26 ins.	52.00	61.00
40x40	30 ins.	68.50	80.00

Side Wall Registers



This is the well known Hart & Cooley line. Made of steel with quick detachable Face. One quarter turn of the two locking clips in the top of Face securely fastens Face and Valve to the Frame. These Registers can be attached to the tin box or stack head by means of straps for which holes have been provided. Wood screws are included for attaching Registers to studding. Made with 1¼-in., 2¼-in., 3¼-in., or 4¾-in. projection from wall, to suit the various needs of any customer. Finished in black japanned, oxidized copper, bright copper, brass, bronze or nickel finishes. Packed 1 in a carton.

No. 151¼ Side Wall Registers

For upper floors, 1¼-inch projection of Register from plaster line.

Size of Face Opening, Ins.	Air Capacity Face	Black Japanned, Each	Oxidized Copper, Each	Brass, Bronze, Copper, Nickel, Each
8x10	50 ins.	2.00	3.50	3.85
8x12	60 ins.	2.40	3.95	4.35
9x12	71 ins.	2.50	4.00	4.40

No. 152¼ Side Wall Registers

For lower floors, 2¼-inch projection of Register from plaster line.

Size of Face Opening, Ins.	Air Capacity Face	Black Japanned, Each	Oxidized Copper, Each	Brass, Bronze, Copper, Nickel, Each
8x10	50 ins.	2.00	3 50	3.85
9x12	71 ins.	3.00	4.50	4.90

No. 153¼ Side Wall Registers

For lower floors, 3¼-inch projection of Register from plaster line.

Size of Face Opening, Ins.	Air Capacity Face	Black Japanned, Each	Oxidized Copper, Each	Brass, Bronze, Copper, Nickel, Each
10x12	75 ins.	4.00	5.75	6.35

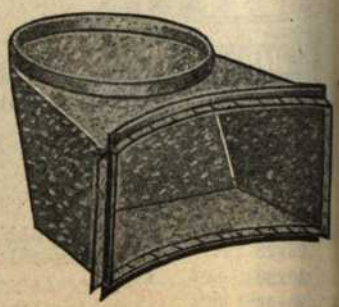
No. 154¾ Side Wall Registers

For lower floors, 4¾-inch projection of Register from plaster line.

Size of Face Opening, Ins.	Air Capacity Face	Black Japanned, Each	Oxidized Copper, Each	Brass, Bronze, Copper, Nickel, Each
12x14	106 ins.	6.50	8.50	9.50

We can furnish sand finish on above at slight additional cost.

Furnace Fittings



While we show only a few items of Fittings merely to represent the line, we can furnish a full line of all staple stove pipe and furnace fittings. Prices and description on request.

Copper Connectors

These connectors consist of a piece of ½-inch soft copper tubing with special ⅛-inch pipe thread female connection on one end and ⅜-inch pipe thread female connection on the other end. A very desirable connection for gas stoves. Flexible and easy to attach. Furnished in five different lengths complete, and we can also furnish the tubing and fittings separately.

⅛, ¼ and ⅜-inch Male or Female Unions only..Each, $0.40
½-inch Female Unions only.....Each, $0.42
½-inch Copper Tube (15-ft. lengths only)....Per ft., $0.22

Connectors with Unions.

Length	Size Tube	Unions	Each
12-inch	½-inch	⅜x⅛-inch Female	$0.96
18-inch	½-inch	⅜x⅛-inch Female	$1.10
24-inch	½-inch	⅜x⅛-inch Female	$1.20
30-inch	½-inch	⅜x⅛-inch Female	$1.30
36-inch	½-inch	⅜x⅛-inch Female	$1.40

Steel Tubing

For connecting gas stoves. Furnished in four different lengths complete with rubber ends for attaching.

Length, ft.	2	4	6	8
Each	$0.30	$0.40	$0.60	$0.80

Steel Tubing in Coils

Same as above except put up in 50 and 100-ft. coils. No coils broken. Rubber ends not included.
50 or 100-ft. coils.....Per ft., $0.09

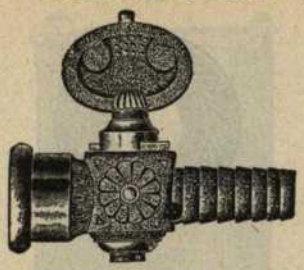
Extra Rubber Ends

Used to make up desired lengths of Steel Tubing when purchased in coils.
Extra Rubber Ends.....Each, $0.06

Gas Stove Tubing

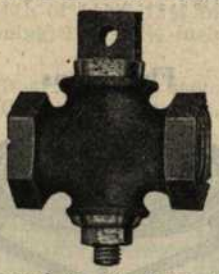
This is ⅜-inch cloth inserted tubing, particularly intended for gas. Furnished in 50-ft. lengths. No lengths cut.
Stove Tubing.....Per ft., $0.12

Female Hose Cocks



Made of brass with pipe thread on one end and hose threaded on the other end.
⅜-inch pipe thread.....Each, $0.36
½-inch pipe thread.....Each, $0.40
Packed 12 in a carton.

Natural Gas Cocks



Ground to Gastight Fit

Size, inch	⅜	½	¾	1	1¼	1½	2
Each	$0.76	$0.86	$1.04	$1.50	$2.40	$3.50	$6.00

Stove Pipe Wire

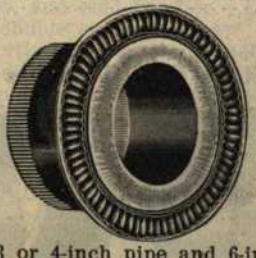
No. 19 wire only. Put up in coils of 50 lineal feet. Packed 12 coils in a carton. No cartons broken.
No. 19 Gauge.....Per carton of 12 50-ft. coils, $0.80

Annealed Stone Wire

This is commonly called Stove Pipe Wire. It is soft annealed. Put up in 12-lb. stones, wrapped with paper. Sold only in full stones.

Gauge No.	16	18	19	20
Per stone	$2.20	$2.30	$2.40	$2.50

Stove Pipe Reducers for Gas Stoves, Etc.



Permits using 3 or 4-inch pipe and 6-inch flue. Packed 1 dozen in carton. Weight per dozen 10 lbs.
6x3.....Per doz., $3.20
6x4.....Per doz., $3.20

Stove Pipe Collars

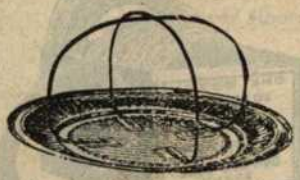
No. 301.

Rope Pattern, Tin, Lacquered Brass Finish, Wide Flange. One dozen in a package. Nos. 301 and 401 have extra wide flange.

No.	Dia., ins.	Hole, ins.	Per doz.
261	9¼	6	$0.80
301	9⅛	3	$0.90
401	9⅛	4	$0.90

Flue Stops

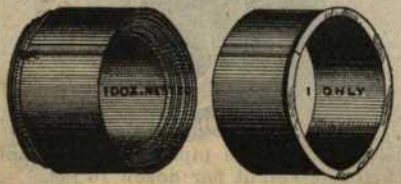
Tin, Brass Lacquered, Star Center, Spring Steel fastening. 8¼-inch diameter for 6-inch flue. One dozen in a box.
No. 26.....Per doz., $2.20



Embossed Tin, Brass Lacquered Finish, Landscape Center, Raised, with double spring steel wire fastening. 8¼-inch diameter for 6-inch flue. One dozen in a box.
No. 3.....Per doz., $1.80

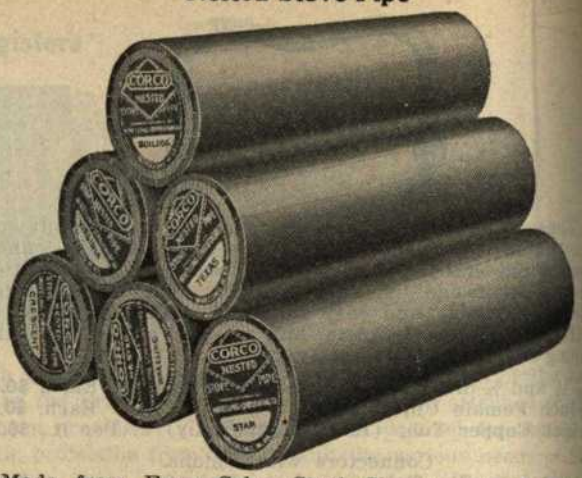
Embossed Tin, Brass Lacquered Finish, Sheet Steel Expander, Center Raised. Adjustable for 5, 6 or 7-inch flue. Diameter 8¼ inches. Holds soot back 3½ inches from the front. One dozen in a box.
No. 30.....Per doz., $2.70

Stove Pipe Thimbles



Galvanized Steel, for 6-inch pipe. One dozen in a bundle.
No. 6G.....Per doz., $1.30

Nested Stove Pipe



Made from Even Color Steel Sheets, 24-inch joints, straight lock seams. No tongues or slots in lock. Packed 25 in a cask of a stiff sheet of steel, with solid wooden heads, air and moisture-proof. Orders must specify gauge and size wanted.

Size, inches	3	4	5	6	7
28 Gauge..Per 100 joints,	.....	.....	.....	$28.00	$32.00
30 Gauge..Per 100 joints,	$18.00	$19.00	$19.50	$25.50	$29.50

We can furnish 4x3 inch 30 gauge and 7x6 inch 28 gauge Taper Joints at $1.00 per 100 joints extra over price of large end.

Half Joints furnished at an extra of $1.00 per 100 over half the price of full joints.

Stove Pipe Elbows

One-piece Elbows, 2-inch ends.

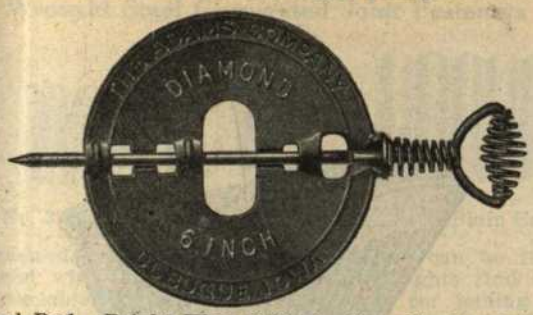
Refined smooth steel, uniform color, blued. Packed 12 in a bundle, wired.

Size, ins.	3	4	5	6	7
28 Gauge.....Per doz.,	.....	.....	.....	$3.60	$4.30
30 Gauge.....Per doz.,	$2.20	$2.40	$3.10	$3.40	$4.30

Adjustable 4-Piece Stove Pipe Elbows, 2-inch Ends, Packed 12 in a crate.

Size, ins.	3	4	5	6	7
29 Gauge.....Per doz.,	$3.60	$3.80	$4.00	$4.20	$5.00

Diamond Smoke Pipe Damper



Steel Rod. Bright Wire Coil Handle. Steel rod is sufficiently strong to drive through ordinary pipe and is made extra long and pointed.

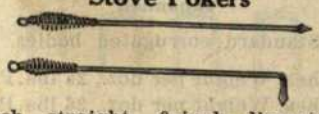
For pipe, size, ins.	3	4	5	6	7	8
Per dozen	$1.90	$2.00	$2.20	$2.50	$3.60	$5.80
For pipe, size, ins				9	10	12
Per dozen				$10.80	$13.50	$16.30

No Rivet Damper Clips and Tail Pieces

Made of steel. Clips on to the damper and no rivets are necessary, although rivets may be used if desired. Tail pieces regularly included. Can be used for any size damper.

No. W583.....Per doz., $2.20

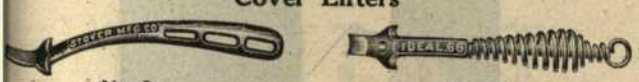
Stove Pokers



No. 120—20-inch, straight, $\frac{3}{16}$-inch diameter, nickel plated. Weight per gross, 90 lbs.....Per doz., $2.10
No. 125—20-inch, bent, $\frac{3}{16}$-inch diameter, nickel plated. Weight per gross, 90 lbs.....Per doz., $2.10
No. 150—22-inch, straight, $\frac{7}{16}$-inch diameter, japanned. Weight per gross, 105 lbs.....Per doz., $3.40
No. 155—22-inch, bent, $\frac{7}{16}$-inch diameter, japanned. Weight per gross, 105 lbs.....Per doz., $3.40
No. 140—26-inch, straight, $\frac{3}{8}$-inch diameter, nickel plated. Weight per gross, 175 lbs.....Per doz., $4.00
No. 145—26-inch, bent, $\frac{3}{8}$-inch diameter, nickel plated. Weight per gross, 175 lbs.....Per doz., $4.00

1 dozen in a box.

Cover Lifters



No. 9 No. 60

No. 9—7¾-inch, cast iron, half round handle, nickel plated. Weight per gross, 30 lbs. Bulk..Per doz., $0.70
No. 60—9-inch, cast iron, nickel plated. Weight per gross, 60 lbs. One dozen in box.....Per doz., $1.60

Stove Scrapers

No. 1—Wrought steel. Length 30 inches; blade 1¼x3 inches. Weight per dozen, 7½ lbs. One dozen in a bundle.....Per doz., $0.80

Portable Ovens

Body of smooth, even colored steel sheets, plain corners, turn buckles and plain handles. Has hinged door, opening to the right. set with 6x7-inch glass panel. Also furnished with solid steel door. Dimensions: Height of body, 12½ inches; width of body, 12½ inches; depth of body. 12½ inches; inside depth, 12¼ inches; door opening, 10½x9½ inches.

No. 63—With Glass Door..Weight each, 13 lbs..Each, $4.80
No. 64—With Steel Door..Weight each, 13 lbs..Each, $4.40

2 in a carton.

Portable Ovens—Continued

Body of smooth, even colored steel sheets, nickeled corners, turn buckles and cold handles. Equipped with drop door with 8x8 inch glass panel. Made also with solid steel door. Dimensions: Height of body, 18 inches; width of body, 14 inches; depth of body, 12½ inches; inside depth, 12 inches; door opening, 11½x11½ inches. Tin and asbestos lining.

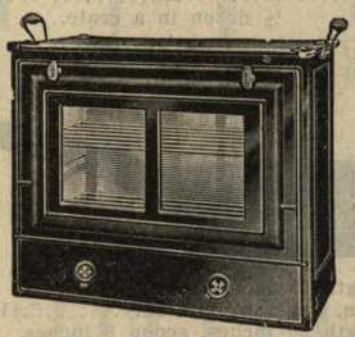
No. 3—With Glass Door...Weight each, 29 lbs..Each, $7.40
No. 4—With Steel Door...Weight each, 29 lbs..Each, $6.80

1 in a carton.

Body of smooth, even colored steel sheets, nickeled corners, turn buckles and cold handles. Two burner. Solid glass front with 8½x16 inch double strength glass panel. Also furnished with solid steel door. Dimensions: Height of body, 18 inches; width of body, 21½ inches; depth of body, 12½ inches; inside depth, 12 inches; door opening, 19x11¾ inches. Tin and asbestos lining.

No. 1—With Glass Door...Weight each, 27 lbs..Each, $8.70
No. 2—With Steel Door...Weight each, 27 lbs..Each. $8.20

1 in a carton.



Body of smooth, even colored steel sheets, nickeled corners, turn buckles, and cold handles. Equipped with two panels, 6x7 inch double strength glass. Made also with a blue or a white vitreous porcelain enamel paneled glass door. Dimensions: Height of body, 18 inches; width of body, 21½ inches; depth of body, 12½ inches; inside depth, 12 inches; door opening, 19x11½ inches. Tin and asbestos lining.

No. 31 —Black Paneled Glass Door. Weight each, 28 lbs.....Each, $ 8.70
No. 31B —Blue Enameled Panel Glass Door. Weight each, 28 lbs.....Each, $10.00
No. 31W—White Enameled Panel Glass Door. Weight each, 28 lbs.....Each, $10.00

1 in a carton.

Keystone Stove Boards

No. 200 Paper-lined Crystal. Each size different design. Face made in one piece, with smooth-pressed corners.

Size	Wt. per doz., lbs.	Per doz.
24x24	27	$12.60
26x26	30	$13.80
28x28	40	$15.50
30x30	45	$18.36
32x32	53	$21.70
34x34	60	$25.20
36x36	65	$28.90

1 dozen in a crate.

No. 80 Wood-lined Crystal. Each size different design. Face made in one piece, with smooth-pressed corners.

Size	Wt. per doz., lbs.	Per doz
24x24	80	$21.30
26x26	90	$25.20
28x28	110	$29.50
30x30	124	$34.30
33x33	150	$40.45
36x36	180	$47.75

½ dozen in a crate.

Fire Shovels

No. 54—Length 15 inches, scoop 7 inches. Weight per dozen, 5 lbs. In bulk only.....Per doz., $2.00

No. 56—Length 20 inches, scoop 8 inches. Weight per dozen, 6 lbs. In bulk only.....Per doz., $2.50

No. 7—Length 16 inches, scoop 7¾ inches. Weight per dozen, 5 lbs. In bulk only.....Per doz., $4.20

No. 9—Length 22 inches, scoop 8¾ inches. Weight per dozen, 6½ lbs. In bulk only.....Per doz., $4.30

No. 11—Length 25 inches, scoop 9 inches. Weight per dozen, 7 lbs. In bulk only.....Per doz., $4.60

Open Coal Hods

Galvanized

Standard corrugated bodies.

No. 616—16 inches. Weight per doz., 30 lbs. Per doz., $10.00
No. 617—17 inches. Weight per doz., 33 lbs. Per doz., $11.00
No. 618—18 inches. Weight per doz., 35 lbs. Per doz., $11.20

Japanned

Standard corrugated bodies.

No. 115—15 inches. Weight per doz., 25 lbs. Per doz., $ 7.00
No. 116—16 inches. Weight per doz., 26 lbs. Per doz., $ 7.80
No. 117—17 inches. Weight per doz., 28 lbs. Per doz., $ 8.60
No. 118—18 inches. Weight per doz., 31 lbs. Per doz., $ 9.60

6 in bundle, wired.

Oil Stove Wicks

We can furnish Cotton (except No. 5) Wicks, complete with perforated Metal Carrier, for the various Oil Stoves on the market. We list patterns below for the more popular stoves. If Wicks are wanted for stoves not listed send us your mail orders, as we no doubt can supply.

No.	To fit	Doz.
1	Detroit Jewel	$5.60
2	Perfection	$5.60
3	Lorain Burner Clark Jewel, Dangler, Direct Action, New Process, Quick Meal and all Lorain Burner Stoves	$7.60
4	Blue Bird pattern for Clark Jewel, Dangler, Ideal, Model, Quick Meal, Universal and 60 other brands of oil stoves	$7.80
5	Rockweave (Asbestos) for Nesco, Round Oak and several other oil stoves	$4.00

Wrought Steel Corrugated Joint Fasteners

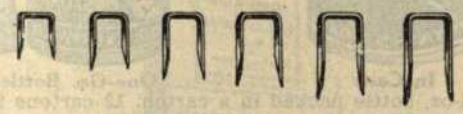
No. 3315, Saw Edge

No. 3300, Plain Edge

Screen door and window screen joints can be firmly fastened with these fasteners. Wheelwrights find them indispensable. There is no better way for joining segments of wood pulleys, etc. Packed in cartons of 250, 500 or 1,000. Orders must state whether Saw Edge or Plain Edge is wanted. Prices apply to either pattern.

No. of Corrugations	Price Per Thousand Depth, Inches ¼	⅜	½	⅝	¾	⅞	1
2	.90	1.10	1.20	1.60	1.80	2.00	2.30
3	1.20	1.50	1.70	2.00	2.30	2.70	2.90
4	1.50	1.90	2.10	2.60	2.90	3.50	3.70
5	1.80	2.40	2.60	3.40	3.70	4.40	4.80
6	2.20	2.80	3.00	3.70	4.30	5.10	5.70
7	2.60	3.20	3.60	4.40	5.00	6.00	6.70
8	3.00	3.60	4.20	5.10	5.80	6.90	7.70

Double Pointed Tacks



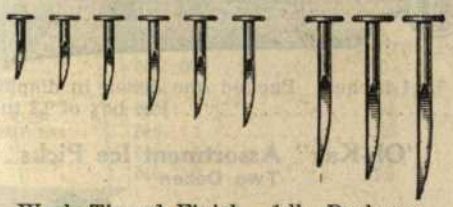
Blued finish. In ⅛-lb. papers, 1 dozen in a carton. No. 9 also in 5-lb. boxes.

Size No.	5	8	9	10
Length, in.	10/32	13/32	14/32	15/32
⅛-lb. papers, lb	$0.60	$0.54	$0.52	$0.50

Size No.	11	12	14
Length, in.	16/32	17/32	19/32
⅛-lb. papers, lb	$0.48	$0.48	$0.48

No. 9—Double Pointed Tacks in 5-lb. boxes. Per box, $2.20

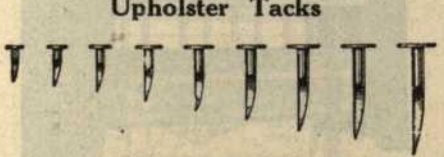
Canvas Tacks



Wash Tinned Finish. 1-lb. Packages.

Size No.	4	6	8	10	12	20	22
Length, in.	7/16	8/16	9/16	10/16	11/16	15/16	16/16
Per lb	$0.40	$0.38	$0.36	$0.34	$0.32	$0.32	$0.32

Upholster Tacks



Blued Finish. In 1 and 25-lb. packages.

Size No.	2½	3	4	6	8
Length, in.	5/16	6/16	7/16	8/16	9/16
1-lb. packages	$0.56	$0.46	$0.42	$0.40	$0.38
25-lb. packages	$0.52	$0.42	$0.38	$0.36	$0.36

Size No.	10	12	14	16
Length, in.	10/16	11/16	12/16	13/16
1-lb. packages	$0.36	$0.34	$0.34	$0.34
25-lb. packages	$0.34	$0.32	$0.32	$0.32

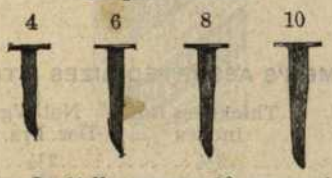
Carpet Tacks

250 Count. Blued Finish.

Put up in assortments of one gross papers consisting of 24 papers No. 6, 72 papers No. 8 and 48 papers no. 10. 250 count. The display stand is included with each assortment, and when placed on the counter or show case will help sell tacks.

No. 2448 ..... Per assortment, $5.00

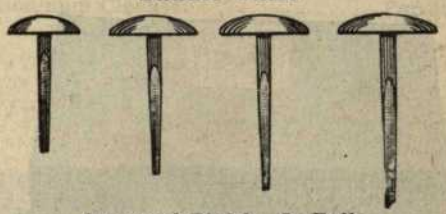
Carpet Tacks.



Blued finish. In ⅛-lb. papers, 12 papers in a package.

No.	4	6	8	10
Length, ins	7/16	½	9/16	⅝
Per lb.	$0.58	$0.56	$0.54	$0.52

Saddle Nails



Japanned Finish. In Bulk.

Size No.	4	4	4
Diam. Head, in.	18/32	18/32	18/32
Length, in.	⅞	1	1⅛

Per lb. $0.50

Shoe Tacks

Bright Finish. In 1-lb. Papers.

Size No.	1	1¼	1½	2	2½	3	4
Length, in.	2½/8	2¾/8	3/8	3½/8	4/8	4½/8	5/8

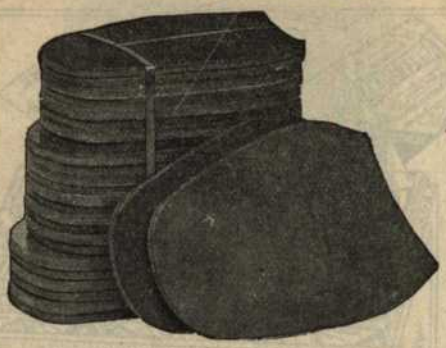
Per lb. $0.20

Iron Cobblers' Nails

Plain Iron Finish. In ¼ and 1-lb. papers.

Size No.	4-8	5-8	6-8
Length, in.	4/8	5/8	6/8
In ¼-lb. packages	Per lb., $0.30		
In 1-lb. packages	Per lb., $0.26		

Wilder XC Acorn Taps



A good grade of oak tanned leather, shaped half soles, very serviceable and unexcelled for wear. One dozen pairs in a bundle. Each bundle of men's taps contains assorted sizes 10 to 13. Each bundle of women's taps contains assorted sizes 3 to 7.

MEN'S ASSORTED SIZES 10 TO 13.

No.	Thickness Bdl. Inches	Net Wght. Doz. Prs. Lbs.	Per Doz. Prs.
140	4	3	$4.40
145	4½	3½	$4.80
150	5	4	$5.30

WOMEN'S ASSORTED SIZES 3 TO 7.

No.	Thickness Bdl. Inches	Net Wght. Doz. Prs. Lbs.	Per Doz. Prs.
13½	3½	2½	$2.10
14	4	2½	$2.50
14½	4½	3	$3.00

Golden Oak Jumbo Blocks

8¼x12½ inches. Each block will cut two pairs of taps. Put up one dozen blocks to a bundle in 7, 8 and 9-lb. weights.

7-lb. . . . . Per doz., $10.00
8-lb. . . . . Per doz., $12.00
9-lb. . . . . Per doz., $14.00

"Bull Frog" Chrome Waterproof Leather Strips

These are high grade Chrome Leather Strips 8¼ inches in width and running 24 to 28 inches long. Cut from the desirable part of the hide and guaranteed strictly waterproof. Well tanned and free from blemish and tick marks. Varying weights, 9 to 11 iron (9/48 to 11/48 inch).

Chrome Leather Strips . . . . . Per lb., $1.60

A1 Wild-Oak Strips

High-grade long wearing scoured oak sole leather, free from brands, cuts or grain damages. Strips are closely trimmed and will range from 20 to 28 inches long, cut either 6½ or 8½ inches wide. Thickness will range from 7 to 9 iron (9/48 to 11/48 inch). Orders should state width wanted.

A1 Wild-Oak Strips . . . . . Per lb., $1.20

Le Page's Liquid Glue

In Cans

One-Oz. Bottles

Each 1-oz. bottle packed in a carton, 12 cartons in a display stand. We will not break display stands.

No.	Size can	Wt., ea., lbs.	No. in case	Per doz.
30	Gill	½	36	$ 4.80
10	½ Pt.	¾	24	$ 8.00
11	Pint	1½	12	$13.60
12	Qt.	2¾	12	$24.00
14	Gal.	10½	6	$72.00
20	1 oz. Bot.	⅛	12	$ 3.20

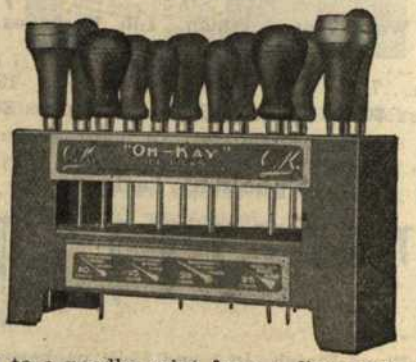
Le Page's Glue in Tubes

Tube. ¾x4 inches. Packed one dozen in display case.

No. 21 . . . . . Per box of 12 tubes, $3.20

"Oh-Kay" Assortment Ice Picks

Two Dozen



Swedged to a needle point from a fine grade of special ice pick steel and carefully heat treated. Points will not break and blades have a fine "springy" temper from point to ferrule. Bright finished blades. Nickel-plated ferrules.

This assortment, consisting of 4 5-in. and 20 6-in., provides a variety of shapes and finishes to suit everyone. Put up in such attractive style that they sell rapidly. Rack substantially made of heavy jute board printed to imitate wood. Labels in red, white and gold. Weight 4½ lbs.

No. 0360 . . . . . Per Asst., $5.50

Sand Paper

Sheets 8¾x10½ inches.

	Per Quire	Per Ream
No. 00	.34	6.75
No. 0	.34	6.75
No. ½	.36	7.20
No. 1	.41	8.10
No. 1½	.46	9.15
No. 2	.52	10.35

One quire of 24 sheets in a bundle, 1 ream of 480 sheets in a package.

Emery Cloth

Sheets 9x11 inches.

	Per Quire	Per Ream
No. 00	1.50	30.00
No. 0	1.50	30.00
No. ½	1.56	31.20
No. 1	1.64	32.75
No. 1½	1.72	34.30
No. 2	1.83	36.50

One quire of 24 sheets in a bundle, 1 ream of 480 sheets in a package.

Emery Paper

Sheets 9x11 inches.

	Per Quire	Per Ream
No. 00	.50	10.00
No. 0	.50	10.00
No. ½	.54	10.80
No. 1	.60	11.90
No. 1½	.68	13.60
No. 2	.79	15.70

One quire of 24 sheets in a bundle, 1 ream of 480 sheets in a package.

Handy Package Sand Paper

This package consists of twenty 4¼x5¼-inch sheets of sand paper of various grades, for general use. Very handy around the house.

Handy Package Sand Paper Assortment.....Per doz., $1.60

Emery Cloth in Rolls**

Fifty yards in a roll, in ¾, 1, 1½ or 2 inch widths.

No.	No. Emery used	¾-in. Width, per roll	1-in. Width, per roll	1½-in. Width, per roll	2-in. Width, per roll
00	Flour.	$3.10	$3.70	$5.00	$6.20
0	120.	$3.10	$3.70	$5.00	$6.20
½	90.	$3.20	$3.80	$5.20	$6.50
1	80.	$3.30	$4.00	$5.50	$6.80
1½	70.	$3.50	$4.30	$5.80	$7.30
2	60.	$3.70	$4.50	$6.10	$7.70

Abrazo Aluminum Cleanser

A very efficient and economical method for removing burnt food, grease stains, tarnish, etc., from Aluminumware, Pyrex, Enamelware, Tin, etc. It consists of six small rolls of steel wool and one piece of Abrazo soap. A very desirable household package.

Abrazo Aluminum Cleanser.....Per doz., $2.00

Packed 1 dozen in a container.

Steel Wool.

Small Size.

Large Size.

Furnished in two grades and in two sizes of packages. No. O is fine and No. 1 is medium. Especially suitable for cleaning surfaces to be painted, etc.

No. 1780—Small size package, No. O grade..Per doz., $1.40
No. 1781—Small size package, No. 1 grade..Per doz., $1.40
No. 1790—Large size package, No. O grade..Per doz., $4.20
No. 1791—Large size package, No. 1 grade..Per doz., $4.20

Packed 1 dozen in a container.

Dover Domanco

THE ELECTRIC IRON THAT WILL *NOT* BURN OUT

An Electric Iron of quality, beautifully nickeled throughout and containing the Vea No-Burn-Out heating element. The heating wire is permanently sealed against those elements which cause burn-outs. Rugged, rigid, pure nickel terminal posts and phosphor bronze connections that will not corrode or rust. Double Life Veriflex cord that will not kink, easily removable reinforced plug. Equipped with a cool ebonized handle that fits the hand. Specially designed edges on ironing surface, making iron glide smoothly on any fabric. Ironing surface 3¾x6½ inches. Weight of iron 6 lbs. 105-115 Volts, 550 Watts. With each iron is included a metal stand to keep hot iron off the table or ironing board. Packed one iron in a carton, 5 cartons to a shipping container. Shipping weight 38 lbs. per carton. Endorsed by Good Housekeeping and others.

No. 2463. . . . . Each, 5.00

Cords for Electric Irons

This cord is made of heavily insulated special cord which is particularly adapted to irons and heating appliances. 6 ft. long. Fitted with standard plug and socket. Will fit practically any make of Electric iron.

No. 7065. . . . . Each, $2.50

Sad Irons

Asbestos Laundry Set

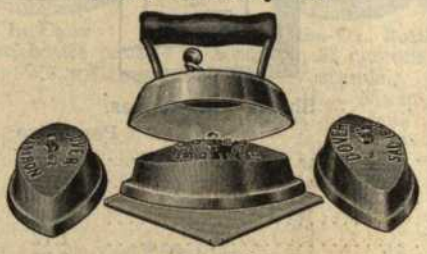
Hood and cores are gracefully designed to concentrate heat on ironing surface.

Hood is asbestos lined and has inner and outer steel shell—is full nickeled and polished, and equipped with spring lock. Bottoms of cores full nickeled and polished—tops aluminum bronzed. Weight of core with hood attached 5½ pounds. Ironing surface 3½x6½ inches. Handle of rubberoid finish. One nickeled, asbestos-lined stand 6 in. x 6 in.

Single set to carton—16 pounds. Three cartons to shipping container—49 pounds.

No. 70. . . . . Per set, $4.50

Dover Laundry Set



Of similar design to the No. 70 but has slightly different finish and style of hood and has dead air space instead of being asbestos lined.

Hood is full nickeled and polished and has sliding catch which seats firmly under head of screw in core. Bottoms of cores carefully polished—tops aluminum bronzed. Edges carefully rounded. Weight of core with hood attached 5 pounds. Ironing surface 3½x6½ inches. Black polished handle. One nickeled steel stand 6 in. x 6 in.

Single set to carton—14½ pounds. Three cartons to shipping container—46 pounds.

No. 60. . . . . Per set, $3.60

Mrs. Potts Sad Irons (Oval Handle)

Cores are full polished and nickeled—all edges carefully rounded. Large, smooth ironing surface. Core tops of stamped steel. Oval, natural wood handle—stretcher black japanned.

One set to carton—three cores, one handle, one stand. Weight per set, 15½ lbs. Three cartons to shipping container. Weight, 49 lbs.

No. 50. . . . . Per set, $3.10

Extra handles for Mrs. Potts Sad Irons. . . . . Per doz., $3.60

Mrs. Potts Sad Irons (Oval Handle)

Similar to No. 50, except only the rim of the irons are polished, the upper part being painted aluminum color. Packed six sets in box. Weight per set, 12¼ lbs., per box, 80 lbs.

No. R550. . . . . Per set, $2.50

Wash Boilers

I C tin with copper bottoms. Stamped flat covers. Stationary wood hook handles. Straight sides.

No.	108	109
Size, ins.	21x11½x13	22⅞x12¾x13
Number in crate	3	3
Weight per crate, lbs.	32	35
Per dozen	$37.00	$41.00

IX tin with copper bottoms. Stamped flat covers. Stationary wood hook handles. Straight sides.

No.	308	309
Size, ins.	21x11½x13	22⅞x12¾x13
Number in crate	3	3
Weight per crate, lbs.	35	38
Per dozen	$38.00	$42.00

IXX tin. Extra large and heavy. Copper bottoms. Stamped rimmed covers. Stationary wood hook handles. Straight sides.

No.	528	529
Size, ins.	22⅞x12¾x13	24⅜x13½x13
Number in crate	1	1
Weight per crate, lbs.	19	20
Per dozen	$62.50	$67.50

IXXXX tin. Extra large and heavy. Copper bottoms. Stamped rimmed covers. Stationary wood hook handles. Straight sides.

No.	548	549
Size, ins.	22⅞x12¾x13	24⅜x13½x13
Number in crate	1	1
Weight per crate, lbs.	20	21
Per dozen	$67.50	$72.50

Galvanized. Stamped Flat Covers. Stationary wood hook handles. Straight sides.

No.	228	229
Size, ins.	21x11½x13	22⅞x12¾x13
Number in crate	3	3
Weight per crate, lbs.	36	40
Per dozen	$33.00	$36.00

Extra heavy and large. Galvanized. High pitched stamped rimmed covers. Stationary wood hook handles. Straight sides.

No.	748	749
Size, ins.	22⅞x12¾x13	24⅜x13½x13
Number in crate	1	1
Weight per crate, lbs.	18½	20½
Per dozen	$51.00	$54.00

Extra large. Copper Wash Boilers, 14 oz. copper outside, tinned inside. Stamped rimmed covers. Stationary wood hook handles. Straight sides.

No.	648	649
Size, ins.	22⅞x12¾x13	24⅜x13½x13
Number in crate	1	1
Weight per crate, lbs.	18	19
Per dozen	$98.00	$114.00

Wash Tubs

Heavy galvanized. Anti-wedge swedge. Drop handles.

No.	0	1	2	3
Size, ins.	18½x15x9	20½x17¾x10½	22¾x19½x11	24½x21¼x11
In b'dle.	6	6	6	6
Wgt., bdl., lbs.	26	36	47	53
Per doz.	$11.00	$13.40	$15.00	$17.50

Extra heavy galvanized. Anti-wedge swedge. With wringer attachments. Stationary wood hook handles. Striped.

No.	100S	200S	300S
Size, ins.	20½x17¾x10½	22¾x19½x11	24½x21¼x11
In bundle.	6	6	6
Wgt., bdl. lbs.	53	59	66
Per doz.	$25.50	$28.30	$31.20

Garbage Cans

Made of galvanized steel, with deep seamless covers, flat bottom. Bailed and nestable.

No.	02	03	04
Capacity, gals.	6	8	10
Dia. top, ins.	12½	14	14
Dia. bottom, ins.	11¾	13	13
Height, ins.	12¼	14	16½
In bundle	12	12	12
Weight, doz., lbs.	54	69	83
Per doz.	$3.50	$4.00	$4.50

Galvanized Pails

Galvanized.

No.	102	122	142
Capacity, quarts.	10	12	14
Size, ins.	10½x8¾	11x10	11½x10¼
In bundle.	12	12	12
Weight, doz., lbs.	21	25	27
Per doz.	$4.70	$5.20	$5.90

Extra Heavy Galvanized. Striped.

No.	1512S	1514S	1516S
Capacity, quarts.	12	14	16
Size, ins.	11⅞x10¼	12½x10⅞	12½x11¾
In bundle.	12	12	12
Weight, doz., lbs.	48	54	57
Per doz.	$11.40	$12.50	$14.40

Dairy Pails

IX Tin Plate. Wire bail with wood grip. Riveted ears.

No.	201	221	241
Capacity, qts.	10	12	14
Size, ins.	11¼x8¾	11¾x9¾	12½x9¾
In bundle	12	12	12
Weight doz., lbs.	30	32	34
Per doz.	$8.40	$8.80	$10.00

Dairy Pails—Continued

IXX Tin Plate. Heavy tinned wire bail with black enameled bail wood. Heavily wired top rim. 1 doz. in a carton.

No.	222	242
Capacity, qts.	12	14
Size, ins.	11¾x9¾	12½x9¾
Weight per doz.	34	37
Per doz.	$10.60	$11.80

IX Full Weight Charcoal Plate. Heavy tinned wire bail with black enameled bail wood. Extra heavy wide ears, heavy rivets. Extra deep foot with heavy bottom roll. Heavily wired top rim. ½ doz. in a carton.

No.	2212	2214
Actual capacity, qts.	13	15
Size, ins.	11¾x10¼	12x11
Weight per doz.	44	46
Per doz.	$12.00	$13.20

IXX Full Weight Charcoal Plate. Heavy tinned wire bail with walnut enameled bail wood. Extra heavy wide ears, heavy rivets. Extra deep foot with heavy bottom roll. Heavily wired top rim. ½ doz. in a carton.

No.	2222	2224
Actual capacity, qts.	13	15
Size, ins.	11¾x10¼	12x11
Weight per doz.	48	50
Per doz.	$14.40	$15.60

Dairy Pails—Continued

IXXXX Full Weight Charcoal Plate. Extra heavy tinned iron wire bail. Extra heavy wide ears. Heavy rivets. Extra deep foot with heavy bottom roll. Heavily wired top rim. ½ doz. in a carton.

No.	2242	2244
Actual capacity, qts.	13	15
Size, ins.	11¾x10¼	12x11
Weight per doz.	58	60
Per doz.	$16.80	$18.00

IXX Full Weight Charcoal Plate. Heavy tinned wire bail. Extra heavy wide ears. Heavy rivets. Extra deep foot with heavy bottom roll. Heavily wired top rim. Large hood with brass wire strainer. ½ doz. in case.

No.	5222
Actual capacity, qts.	13
Size, ins.	11¾x10¼
Weight per doz.	61
Per doz.	$24.00

Milk Cans

Made of special cold rolled milk can material. Receiver and neck are drawn in one piece. Breast is seamless and rim swedged. Body seam strongly riveted. All seams and rivets are carefully floated with pure solder. Furnished with hollow handles. Each can protected by a paper cover in shipping.

No.	1050	1080	1100
Capacity, quarts.	20	32	40
Weight, each.	11	15	17
Each.	$5.40	$6.50	$6.70

Utility Steel Baskets

1 Bushel Capacity

Galvanized, corrugated body, with reinforcing clips and drop handles. Round bottom. 17½x11¾ inches. 1 dozen in a bundle. Weight per doz., 66 lbs.

No. 1501.....Per doz., $17.60

½ Bushel Capacity

Galvanized, corrugated body, with bail and side handle. Round bottom. 14x9 inches. 1 dozen in a bundle. Weight per doz., 40 lbs.

No. 50½.....Per doz., $12.00

Half-Bushel Measures

½ Bushel Capacity

Galvanized body with bail and side handle. Corrugated galvanized iron flat bottoms. Size 13x10⅜ ins. ½ dozen in a bundle. Weight per doz., 40 lbs.

No. 26.....Per doz., $12.00

Gasoline Cans

Galvanized. Plain breasts. Painted red. Large spouts and 1½-in. screw caps.

No.	Gals.	Height, ins.	Wgt. Per Doz.	Per Doz.
501	1	6¼	17 lbs.	$ 7.80
502	2	8¼	34 lbs.	$11.80
503	3	9¼	60 lbs.	$16.00

Nos. 501—1 doz.; 502—½doz.; 503—¼ doz., in a carton.

Oil Cans

Galvanized. Large spouts and 1½-in. screw caps. Banded top and bottom. Plain stamped tin breasts. 1 gal. capacity. Height. 6¼ ins. 1 dozen in carton. Weight per dozen. 15½ lbs.

No. 0.....Per doz., $6.80

Galvanized. Large spouts and 1½-in. screw caps. Banded top and bottom. Galvanized breasts. ¼ dozen in carton.

No.	Gals.	Height, ins.	Wgt. Per Doz.	Per Doz.
102	2	8¼	32 lbs.	$10.30
103	3	9¼	60 lbs.	$14.60
105	5	10½	72 lbs.	$17.80

Scrub Brushes

Filled with 5 rows of Palmetto fibre. Blocks 8¼ inches long. Packed 1 dozen in carton. Weight per doz., 7½ lbs.

No. Jack.....Per doz., $6.40

Filled with 5 rows of White Tampico. Blocks 10½ inches long. Packed 1 dozen in carton. Weight per doz., 7½ lbs.

No. 604.....Per doz., $6.80

Filled with White Tampico, 5 rows at the ends, 3 rows in the center. Blocks 8½ inches long. Packed 1 dozen in carton. Weight per doz., 7 lbs.

No. 702.....Per doz., $5.40

Mops

Peerless Slasher

Peerless Slasher grade, highest quality combed slasher white thread yarn. Furnished in two styles, ferruled and tied, with 54-inch handle. The ferruled mops are put up each mop in an individual bag; six in a bundle. The tied mops are six in a bundle.

		Tied	Ferruled
No. 12	Weight per dozen 17 lbs. Per doz.,	$ 6.00	$ 6.50
No. 16	Weight per dozen 18 lbs. Per doz.,	$ 8.00	$ 8.50
No. 20	Weight per dozen 24 lbs. Per doz.,	$10.60	$11.00
No. 24	Weight per dozen 26 lbs. Per doz.,	$12.60	$14.00

Queen Cotton

Queen Cotton Grade is eight-ply soft near white yarn. Furnished ferruled only with 54-inch handle. Each mop put up in an individual bag; six in a bundle.

No. 12	Weight per dozen 17 lbs. Per doz.,	$ 6.00
No. 16	Weight per dozen 18 lbs. Per doz.,	$ 7.50
No. 20	Weight per dozen 24 lbs. Per doz.,	$ 9.80
No. 24	Weight per dozen 26 lbs. Per doz.,	$12.50

Mop Heads

Furnished in two grades, Peerless Slasher or Queen Cotton, as described in mops listed above. 1 dozen in a bundle.

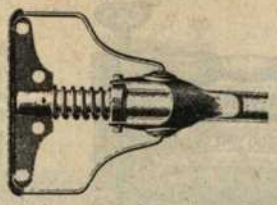
Peerless Slasher

16 oz.	Weight per dozen 12 lbs. Per doz.,	$ 8.40
20 oz.	Weight per dozen 15 lbs. Per doz.,	$10.50
24 oz.	Weight per dozen 18 lbs. Per doz.,	$12.00
32 oz.	Weight per dozen 24 lbs. Per doz.,	$16.80

Queen Cotton

16 oz.	Weight per dozen 12 lbs. Per doz.,	$ 7.20
20 oz.	Weight per dozen 15 lbs. Per doz.,	$ 9.20
24 oz.	Weight per dozen 18 lbs. Per doz.,	$10.80
32 oz.	Weight per dozen 24 lbs. Per doz.,	$14.40

Mop Sticks



Made with steel head and spring lever. Handles are waxed and polished. 1 dozen in a bundle.

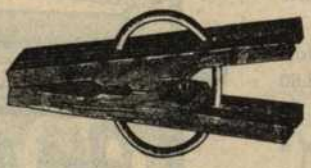
No. 7.....Per doz.. $2.50

Clothes Pins

Common type, 4-inch. Hardwood, natural finish, sanded. Packed 2 dozen in a carton, 24 cartons in a case. Also packed in cases of 5 gross bulk. No cases broken.

No. 44—Clothes Pins, 2 doz. in box, 24 boxes in case. Weight, 13 lbs. per case.....Per case, $2.50

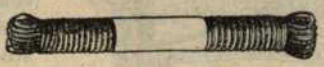
No. 45—Clothes Pins, 5 gross bulk in case. Weight, 13¼ lbs. per case.....Per case, $2.50



"Hoyt's" type, hardwood finish, clamped, not pushed on the clothes line, and hold clothes securely. The spring is one continuous piece of galvanized (rust-proof) steel wire. Packed 3 doz. in a carton, 20 cartons to the case. Weight per case 16 lbs.

No. 312—Clothes Pins.....Per case, $8.00

Clothes Lines



Winner

This is a twisted cotton line, all thread and good quality. Guaranteed full 50 ft. length. Packed one dozen in a bundle, one gross in a bale.

No. 89—Winner Cotton Clothes Lines....Per dozen, $5.00

No. 6 Unfinished

This is a sash cord clothes line unfinished. Best quality cotton. Will outwear any cotton or fibre line on the market. Guaranteed full 50 ft. lengths. Packed one dozen in a bundle, one gross in a bale.

No. 6—Unfinished Clothes Lines.....Per dozen, $10.80

Wire Clothes Lines

Twisted

Made of 6 No. 19 gauge wires, twisted. Put up in 100-ft. coils.

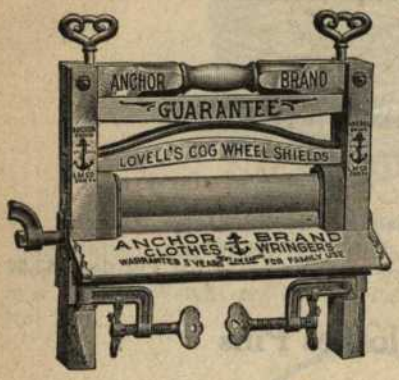
Per dozen coils.....$12.00

Solid

Made of No. 9 Wire, 1 wire. Put up in 100-ft. coils.

Per dozen coils.....$10.50

Anchor Brand Clothes Wringers



Guarantee

Warranted 5 years. Steel ball bearings. Flat steel spring. Rolls 10x1¾ inches and 11x1¾ inches.

No. 790 — 10-in. Per doz...$114.60

No. 791 — 11-in. Per doz...$126.60

In individual packages, 3 in a shipping carton.

Weight per carton, No. 790, 58 lbs.; No. 791, 62 lbs.

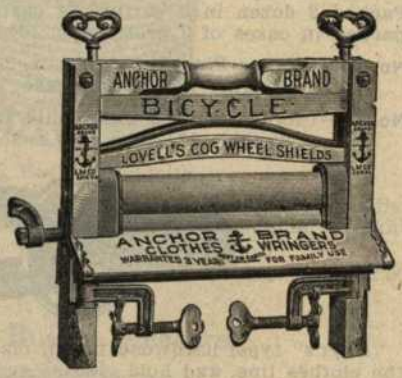
Bicycle

Warranted 3 years. Steel ball bearings. Flat steel spring. Rolls 10x1¾ inches.

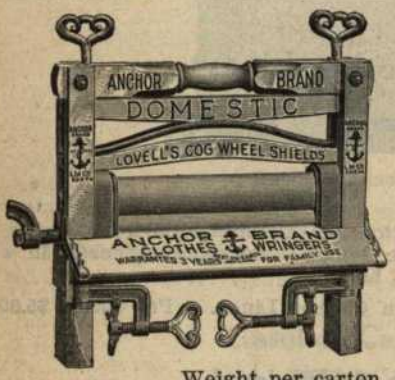
Per doz.

No. 770....$108.60

In individual packages, 3 in a shipping carton.



Weight per carton, 58 lbs.



Domestic

Warranted 3 years. Plain metal bearings. Flat steel spring. Rolls 10x1¾ inches.

Per doz.

No. 670....$100.60

In individual packages, 3 in a shipping carton.

Weight per carton, 57 lbs.

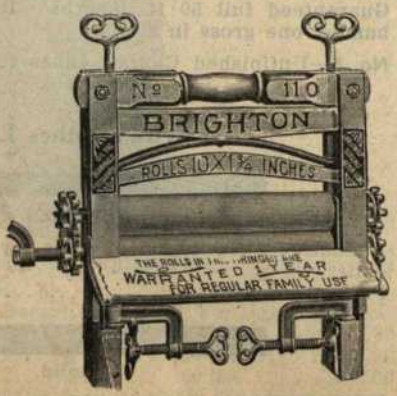
Brighton

Warranted 1 year. Plain metal bearings. Flat steel spring. Rolls 10x1¾ inches.

Per doz.

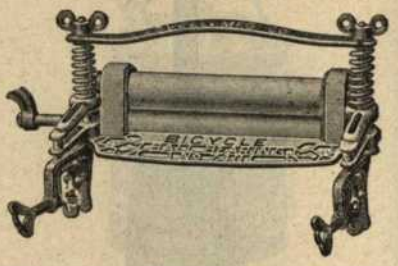
No. 110.....$90.60

In individual packages, 3 in a shipping carton.



Weight per carton, 53 lbs.

Bicycle Iron Frame



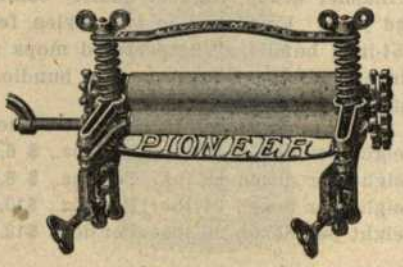
Warranted 3 years. Galvanized malleable iron frame. Steel ball bearings. Steel spiral springs. Rolls 10x1¾ inches.

No. 740.....Per doz., $108.60

In individual packages, 3 in a shipping carton.

Weight per carton, 61 lbs.

Pioneer Iron Frame



Warranted 1 year. Galvanized malleable iron frame. Plain bearings. Steel spiral springs. Rolls 10x1¾ inches.

No. 22.....Per doz., $88.60

In individual packages, 3 in a shipping carton.

Weight per carton, 55 lbs.

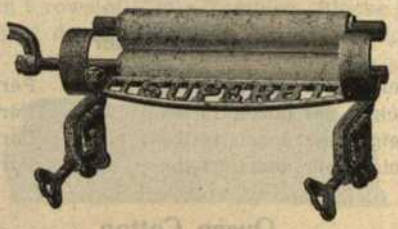
Domestic Iron Frame

Warranted 3 years. Galvanized malleable iron frame. Plain bearings. Steel spiral springs. Rolls 10x1¾ inches.

No. 22D.....Per doz., $88.60

Weight per carton, 55 lbs.

Superb Iron Frame



Warranted 1 year. Flat steel spring frame. Rolls 10x1¾ inches.

No. 2.....Per doz., $61.60

In individual packages, 3 in a shipping carton.

Weight per carton, 39 lbs.

Anchor Brand Clothes Wringers—Continued

Bicycle

Warranted three years. Steel ball bearings. Flat steel spring. Reversible water board. Rolls 10x1¾ inches.

No. 770B.....Per doz., $175.00

One in a wooden crate.

Guarantee

Warranted five years. Steel ball bearings. Spiral steel springs. Reversible water board. Rolls 11x1¾ inches.

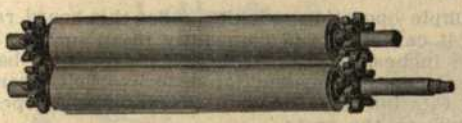
No. 781B.....Per doz., $196.00

One in a wooden crate.

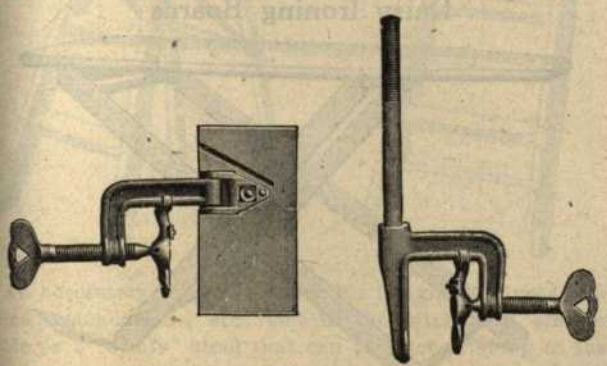
Clothes Wringer Repairs

Rolls for No. 2 Superb.....Each, $5.00

Rolls for No. 110 Brighton, No. 22 Pioneer and No. 22D Domestic.....Each, $5.00



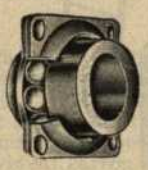
Rolls for Nos. 770, 740, 770B Bicycle, Nos. 790, 791, 781B Guarantee, No. 670 Domestic.....Each, $5.50



No. 7—Right Hand Clamps for Anchor Brand wood frame wringers.....Each, $1.25

No. 8—Left hand Clamps for Anchor Brand wood frame wringers.....Each, $1.25

No. 9—Clamps for No. 740 Bicycle, No. 22 Pioneer and No. 22 Domestic.....Each, $2.00



No. 1—Ball Bearings.....Per doz., $8.00

No. 2—Pressure Screws.....Per doz., $7.00

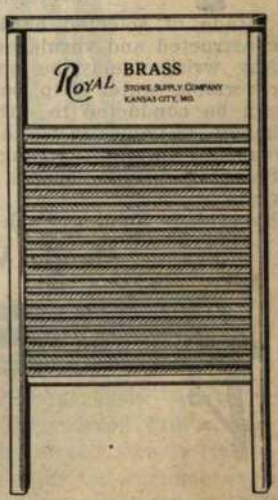
No. 3—Handles.....Per doz., $2.00

Wash Boards

The Royal Brass is made from best grade heavy sheet brass. Framework from selected seasoned lumber with 5 back trusses. Washing surface approximately 11x11 inches.

The Royal Silver is made of specially prepared bright metal, which will give long service. Framework from selected seasoned lumber with 5 back trusses. Washing surface approximately 11x11 inches.

The Royal Glass is made of heavy corrugated glass that will practically last a lifetime. Washing surface approximately 11x12 inches.

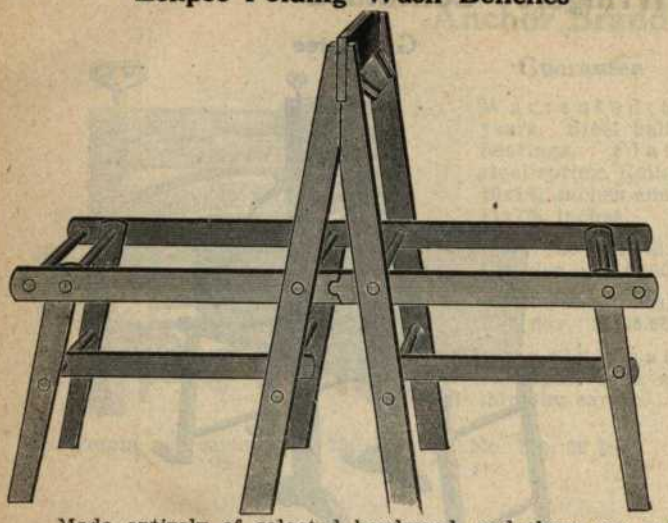


Royal Brass.....Per doz., $12.50

Royal Silver.....Per doz., $ 8.80

Royal Glass.....Per doz., $14.40

Eclipse Folding Wash Benches



Made entirely of selected hardwood, and there are no metal castings to become broken or get out of order. These benches are immersed in oil to make them water and weather-proof. Due to the patent lock device, this bench is perfectly steady when in use, no matter whether there is a tub on each side, or on only one side. Any style of wringer may be quickly attached. 35 inches in height, with a tub height of 19 inches. Folds into compact form occupying little space when not in use. Shipping weight 220 pounds per dozen. Packed two to the crate.

Eclipse Wash Bench.....Per doz., **$55.00**

Eversteady Folding Wash Benches

Made of selected hardwood. These benches are well constructed and varnished. Perfectly steady when in use. Any wringer may be quickly attached. Equipped with reversible water drip board; drain water from wringer can be conducted to either side. Benches 20 inches in height, 18 inches in width, 42 inches in length. Folds into compact form, occupying little space when not in use. Shipping weight 360 lbs. per dozen. Packed two to the crate.

Eversteady Folding Wash Bench.....Per doz., **$78.00**

Handy Wash Benches

Made of selected hardwood, well constructed and varnished. Platform reinforced with three $\frac{5}{16}$-inch steel rods. An ideal bench to be used in connection with an Electric Washing Machine. Holds two tubs or a tub and clothes basket. 20 inches in height, 18 inches in width, 51 inches in length. Weight 220 lbs. per dozen. Packed six to the crate.

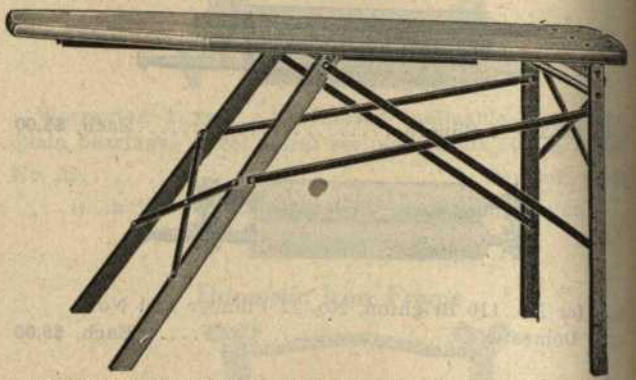
Handy Wash Bench.....Per doz., **$108.00**

Rid-Jid Ironing Boards

The Rid-Jid is one of the most practical ironing tables ever constructed. It is the only ironing table nationally advertised. Size of Top, 15x56 inches. Three sturdy legs —stands rigidly on any floor, even a floor that's warped. Cannot wiggle, wabble, slip or slide. Light in weight. Constructed of light, strong spruce. Securely braced. Has steel joints that cannot work loose or bind. Long open end—extends two-thirds the length of the board. Convenient for ironing circular garments. Only 2½ inches thick when folded. Fits into small space. Folds or opens with one easy motion. Weight, 180 pounds per dozen. Packed two to the crate.

Rid-Jig Ironing Boards.....Per doz., **$62.00**

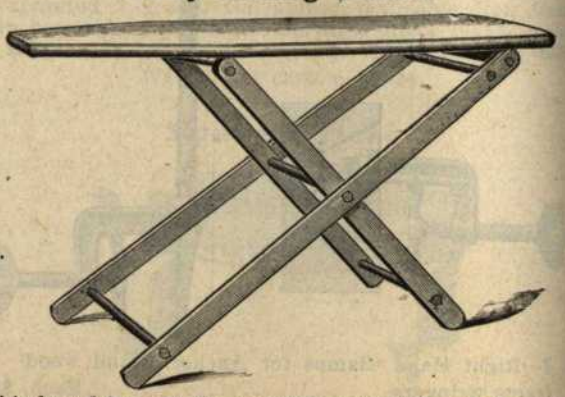
Queen Ironing Boards



One simple operation quickly makes this board ready for use, and it can be closed compactly in an instant. Size of top 15x58 inches. Made of selected clear white basswood. The patent trussed construction assures great strength and rigidity. Fits into small space. Weight 250 lbs. per dozen. Packed two to the crate.

Queen Ironing Board.....Per doz., **$54.00**

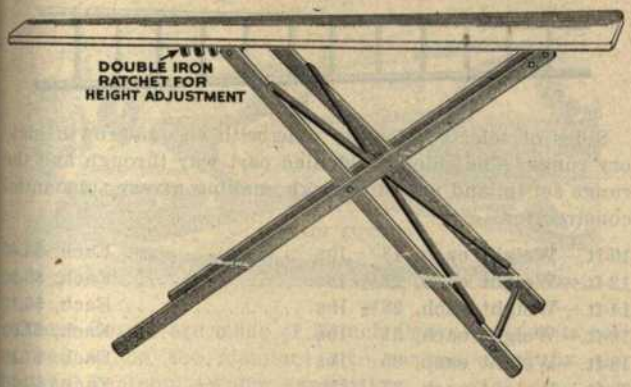
Daisy Ironing Boards



This board is most thoroughly practical in every respect. A very light all wood ironing table. Size of top 13x54 inches. Hardwood legs. Weight 185 lbs. per dozen. Packed two to a crate.

Daisy Ironing Board.....Per doz., **$42.00**

Special Folding Ironing Boards



The Special Folding Ironing Board is designed for the woman who prefers a light, strong table that is easy to move about. Equipped with two iron ratchets offering adjustments to three different heights. Top is 54 in. long, 11 in. wide, tapering to 7 in. at small end and is made from selected basswood or cottonwood. Legs of hardwood. Approximate weight 150 lbs. per dozen. Packed two in crate.

Special Ironing Boards.....Per doz., **$36.00**

Skirt Boards

Made of white basswood, well shaped and finished. Wrapped in heavy paper, and packed one-half dozen to the crate.

Cut shows that we can furnish other lengths, but we regularly carry only 4 and 5 foot. Other sizes must be furnished on special order from factory.

4 ft. weighs approximately 60 lbs.; 5 ft. 96 lbs. per dozen.

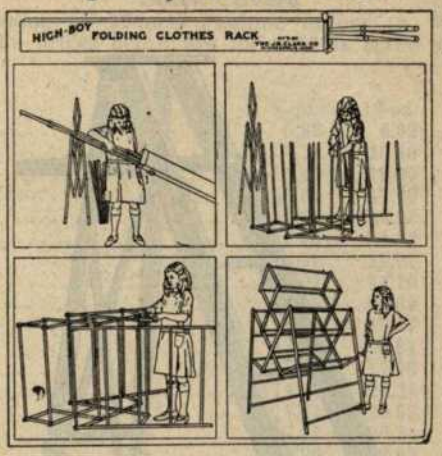
4 foot. . . ..Per doz., **$17.20**
5 foot. . . ..Per doz., **$26.00**

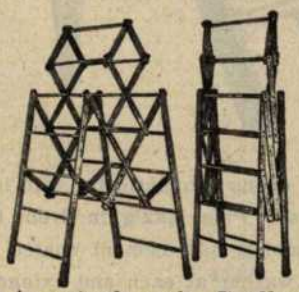
Ladder Stools

An absolutely safe stepladder for hanging pictures, curtains, knick-knacks, etc., and in the kitchen at sink or table as a "comfy" stool that can be hitched along to just the spot wherever the cook or helper may be temporarily at work and needs an easy seat a bit higher than afforded by a common chair. Collapsible when not in use. Oil finish. Packed one-half dozen to the crate. Shipping weight, 110 pounds per dozen. All hardwood. 25 inches high. Steps are bolted to side standards.

Ladder Stool.....Per doz., **$30.00**

High-Boy Clothes Rack





The High-Boy is a sturdy rack. It offers 57 feet of drying surface on which to hang the largest washing. When closed it is 9 inches wide and 58 inches high. It is built of selected hardwood, thoroughly seasoned. It is smoothly finished and well proportioned. Packed semi-knock down in an individual carton. Saves breakage in shipping. Easy to set up.

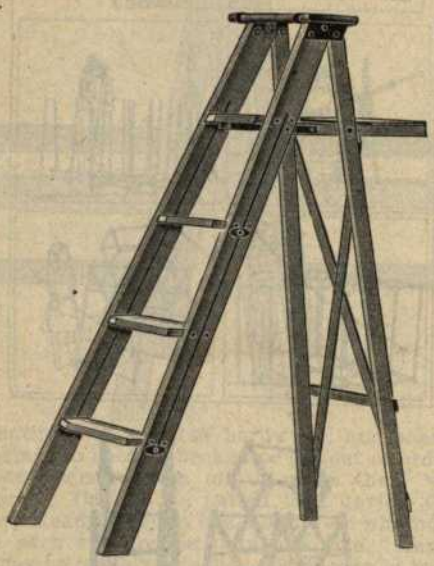
High-Boy Clothes Rack.....Per doz., **$36.00**

Electric Step Ladders

Built from the first grade of Norway Pine. ⅞x2¾ in. front legs, ⅞x1½ in. back legs. Safeguarded with a steel rod under every step and with extra steel fasteners riveted to back braces, this ladder will satisfy the customer who is looking for a stepladder of more than average stability.

6 foot—Wgt. each, 17 lbs.....Each, **$ 6.00**
8 foot—Wgt. each, 21 lbs.....Each, **$ 8.00**
12 foot—Wgt. each, 36 lbs.....Each, **$12.20**

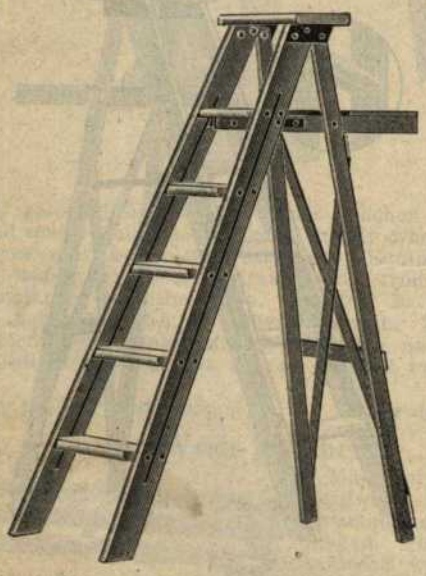
Perfection Step Ladders



The pail shelf opens automatically with ladder. Made of first grade Norway Pine ⅞x2¾ in. front legs, ⅞x1½ in. back legs, assembled with cement coated nails. An iron rod with heavy washer at each end extends from side to side beneath every step, thus preventing any spreading. Cemented coated nails used throughout.

4 foot—Wgt. each, 10 lbs.....Each, **$3.40**
5 foot—Wgt. each, 12½ lbs.....Each, **$4.20**
6 foot—Wgt. each, 14 lbs.....Each, **$5.20**
8 foot—Wgt. each, 20 lbs.....Each, **$6.80**

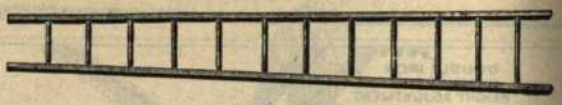
Pioneer Step Ladders



The lightest practical stepladder possible to manufacture. Made of Norway Pine. ⅞x2¾ in. front legs, ⅞x1½ in. back legs, and assembled with cement coated nails. Pressed steel top fasteners and braces. Automatic shelf.

4 foot—Wgt. each, 10 lbs.....Each, **$2.90**
5 foot—Wgt. each, 12½ lbs.....Each, **$3.70**
6 foot—Wgt. each, 14 lbs.....Each, **$4.40**

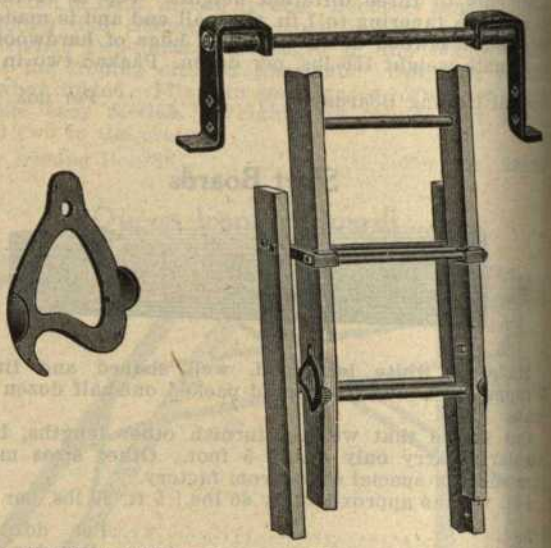
Taper Ladders



Sides of selected Norway pine with second-growth hickory rungs. The sides are drilled part way through and the rungs set in, and nailed through, making a very substantial construction.

10-ft.—Weight each, 18 lbs.....Each, **$4.40**
12-ft.—Weight each, 23½ lbs.....Each, **$5.30**
14-ft.—Weight each, 28½ lbs.....Each, **$6.10**
16-ft.—Weight each, 31 lbs.....Each, **$7.00**
18-ft.—Weight each, 35 lbs.....Each, **$7.70**
20-ft.—Weight each, 37 lbs.....Each, **$9.40**

Extension Ladders

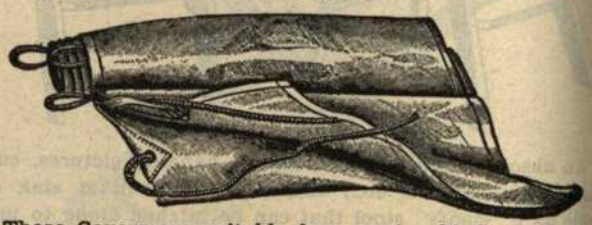


Sides of selected Norway pine with second growth hickory rungs. Well made and ironed. Rung construction same as on taper ladders.

Length	Length Section	Weight Each	Each
28 ft.	16 ft. and 12 ft.	63 lbs.	$16.30
30 ft.	16 ft. and 14 ft.	67 lbs.	$17.60
32 ft.	18 ft. and 14 ft.	72 lbs.	$19.60
34 ft.	18 ft. and 16 ft.	76 lbs.	$20.00
36 ft.	18 ft. and 18 ft.	81 lbs.	$21.50
40 ft.	20 ft. and 20 ft.	90 lbs.	$24.00

We can also furnish rope and pulley attachment for raising the upper ladder at an extra cost of 1.00 net.

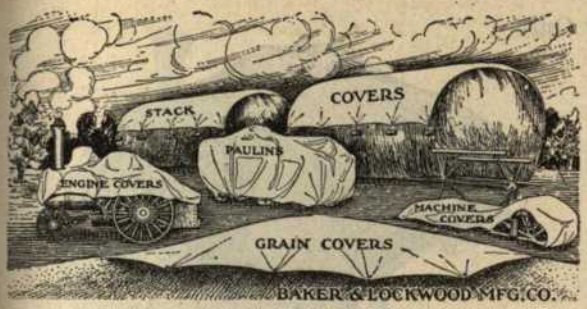
Binder Covers



These Covers are suitable for covering binders, wagons, or for stack covers. Furnished with brass grommets and tie ropes.

7x15 feet, 8-ounce duck.....Each, **$11.40**
7x15 feet, 10-ounce duck.....Each, **$13.60**
10x16 feet, 8-ounce duck.....Each, **$16.00**
10x16 feet, 10-ounce duck.....Each, **$19.00**

29-in. Standard Plain White Paulins or Stack Covers



These Covers are made of 29-inch Canvas, which is recognized to be the standard size recommended by the National Tent and Awning Association.

Paulins are furnished with grommets about five feet apart.

Size, Feet	8-oz. Duck	10-oz. Duck	12-oz. Duck	12-oz. Double Filling Duck
5½-9	6.13	7.36	8.76	10.23
7x12	9.62	11.56	13.75	16.06
7x15	12.00	14.44	17.18	20.06
10x10	10.54	12.67	15.07	17.60
10x12	12.64	15.20	18.08	21.12
10x14	14.73	17.74	21.10	24.64
10x15	15.80	19.00	22.60	26.46
10x16	17.00	20.43	24.30	28.16
10x17	18.20	21.85	25.99	30.36
10x18	19.23	23.12	27.50	32.12
11x13	15.39	18.53	22.04	25.74
11x14	16.68	19.95	23.73	27.72
11x15	17.80	21.38	25.43	29.70
11x16	18.96	22.80	27.12	31.68
12x14	18.70	22.49	26.75	31.24
12x16	21.33	25.65	30.51	35.64
12x18	23.96	28.82	34.28	39.60
12x20	26.59	31.99	38.05	44.44
14x16	25.46	30.64	36.44	42.57
14x18	28.60	34.52	41.06	47.96
14x20	31.86	38.32	45.58	53.24
14x22	32.38	40.14	47.74	55.77
14x24	37.13	44.65	53.11	62.04
16x16	30.55	35.79	42.57	49.72
16x18	31.86	38.32	45.58	53.24
16x20	34.49	41.49	49.35	57.64
16x22	38.18	45.92	54.62	63.80
16x24	42.66	51.39	61.02	71.28
16x26	46.61	56.05	66.67	77.88
16x28	50.82	61.12	72.70	84.92
16x30	53.03	63.89	75.99	88.77
18x20	40.70	48.93	58.20	67.98
18x22	43.20	51.62	61.40	71.72
18x24	47.80	57.48	68.37	79.86
18x26	52.55	63.18	75.15	87.78
18x28	57.30	68.88	81.93	95.70
18x30	59.64	71.73	85.32	99.66
18x32	64.40	77.43	92.10	107.58
18x36	71.50	85.98	102.27	119.46
18x40	80.70	97.38	115.83	135.30
20x24	52.93	63.65	75.71	88.44
20x30	66.47	79.57	94.63	110.55
20x36	79.40	95.48	113.57	132.66
20x40	90.06	108.30	118.82	150.48
24x30	79.40	95.48	113.57	132.66
24x36	95.92	114.64	136.36	159.28
24x40	107.82	129.68	154.26	180.18
24x50	133.10	157.08	190.41	222.42

Weights of Paulins

To arrive at approximate weights of Paulins we give below the weights on a few sizes and others can be figured proportionately.

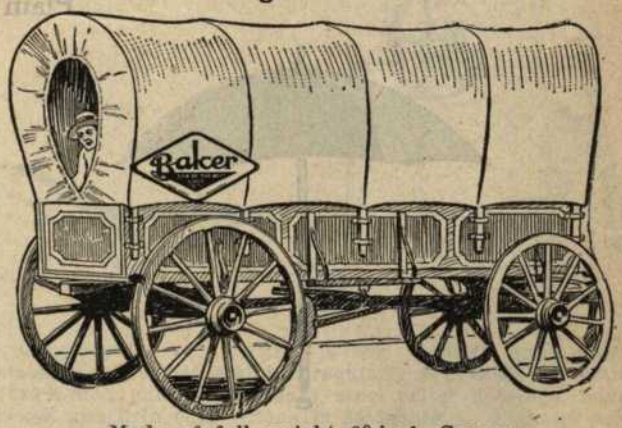
12x18 ft.....29 in..... 8 oz.....Weight, 42 lbs.
12x18 ft.....29 in.....10 oz.....Weight, 52 lbs.
12x18 ft.....29 in.....12 oz.....Weight, 62 lbs.
12x18 ft.....36 in..... 8 oz.....Weight, 36 lbs.
12x18 ft.....36 in.....10 oz.....Weight, 43 lbs.
12x18 ft.....36 in.....12 oz.....Weight, 51 lbs.

36-in. Competition Grade Plain White Paulins or Stack Covers

Made same as 29-inch Paulins, except in weight of Duck. The prices below are for Paulins made of 36-inch material.

Size in Feet	8-oz.	10-oz.	12-oz.
5½x9	5.82	6.62	7.36
7x12	9.14	10.40	11.56
7x15	11.40	13.00	14.44
10x10	10.01	11.40	12.67
10x12	12.01	13.68	15.20
10x13	13.02	14.82	16.47
10x14	13.99	15.97	17.74
10x15	15.01	17.10	19.00
10x16	16.15	18.39	20.43
10x17	17.29	19.67	21.85
10x18	18.27	20.81	23.12
11x14	15.85	17.96	19.95
11x15	16.91	19.24	21.38
11x16	18.01	20.52	22.80
12x14	17.77	20.24	22.49
12x16	20.26	22.99	25.65
12x18	22.76	25.94	28.82
12x20	25.26	28.79	31.99
14x16	24.19	27.58	30.64
14x18	27.17	31.07	34.52
14x20	30.27	34.49	38.32
14x22	30.76	36.13	40.14
14x24	35.27	40.19	44.65
16x16	29.02	32.21	35.79
16x18	30.27	34.49	38.32
16x20	32.77	37.34	41.49
16x22	36.27	41.33	45.92
16x24	40.53	46.26	51.39
16x26	44.28	50.47	56.05
16x28	48.28	55.00	61.12
16x30	50.38	57.50	63.89
18x20	38.67	44.04	48.93
18x24	45.41	51.73	57.48
18x26	49.92	56.86	63.18
18x30	56.66	64.56	71.73
18x32	61.18	69.69	77.43
18x36	67.93	77.38	85.98
18x40	76.67	87.64	97.38
20x24	50.28	57.29	63.65
20x30	63.15	71.61	79.57
20x36	75.42	85.93	95.48
20x40	85.56	97.47	108.30
24x30	75.43	85.93	95.48
24x36	91.12	103.18	114.64
24x40	102.43	116.71	129.68
24x50	126.45	141.37	157.08

Wagon Covers



Made of full weight 29-inch Canvas.

Size ft.	8-oz. Duck Each	10-oz. Duck Each
10x15	15.80	19.00
11x15	17.80	21.38
12x14	18.70	22.49
12x16	21.33	25.65
14x16	25.46	30.64
14x18	28.60	34.52
16x16	30.55	35.79
16x20	34.49	41.49

For Tents, see Pages 73 to 76.

Advertising Umbrellas

From Factory Only

6-Rib Pattern.

8-Rib Pattern

Covered with a high-grade union drill. Ribs are of heavy tempered steel wire, 38 inches long. Extra heavy ring notcher and runner of pressed steel. The very best construction throughout.

The cover is fastened to the rib ends with patented BALL TIP metal pockets, and can be very easily removed, if necessary. There is a metal cap on top of the cover to keep the water from running down the pole.

Handles of hard maple, oil finished, 1½ inch diameter. Complete fixtures for attaching to wagon furnished without charge.

The six-rib umbrellas furnished alternate sections of orange and white. The eight-rib umbrellas are supplied with broad sections in orange and white with the narrow corner panels of some contrasting color.

All printing must be in black ink. The wide panels only are printed on the eight-rib umbrellas.

In making up your copy for printing use only words that are necessary. The fewer words the larger the type. If you prefer we will make up copy for you. Send us your letterhead.

Regularly furnished with two forms of printing, used on alternate sections of the Umbrella. When more than two forms are wanted, a nominal charge will be added for each additional form.

Prices are F. O. B. Factory, Troy, Ohio.

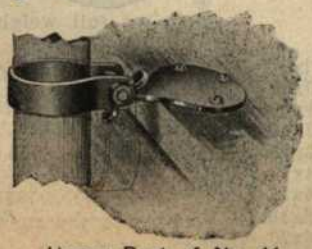
	Schedule No. 1		Schedule No. 2	
	6-Rib	8-Rib	6-Rib	8-Rib
Lots of 6 Umbrellas....Each.	$5.70	$5.90	$5.80	$6.00
Lots of 12 Umbrellas....Each.	$5.20	$5.40	$5.30	$5.50
Lots of 25 Umbrellas....Each.	$4.80	$5.00	$4.90	$5.10
Lots of 50 Umbrellas....Each.	$4.60	$4.80	$4.70	$4.90
Lots of 100 Umbrellas....Each.	$4.30	$4.50	$4.40	$4.60

Price Schedule No. 1 applies when half or less of the cover is colored other than white in both six and 8-rib patterns.
Price Schedule No. 2 applies when more than half of the cover is colored other than white in both six and 8-rib patterns.

List of Color Combinations.

Orange and White; Red and White; Tan and White; Tan, White and Orange; White with Blue corners; Tan with Blue Corners; White with Red Corners; Tan with Red Corners; White with Orange Corners; White with Green Corners; Tan and White with Orange Corners; White with Red and Orange Corners; White with Red and Blue Corners; White with Orange and Blue Corners; Solid Tan. By "Corners" we refer to the narrow corner panels used only in 8-rib umbrellas.

Plain Umbrellas



Upper Part of No. 11.

Lower Part of No. 11.

For use on Wagons, Trucks, Tractors, Harvesters, or Any Place a Sunshade is Needed.

With eight heavy ⅛-inch steel ribs. Can furnish blue or brown. Attachment for wagon or tractor platform always furnished without extra charge (see illustration).

No. 1 Drill—38-inch ribs, blue....Each, $5.50
No. 1 Drill—38-inch ribs, brown....Each, $5.00
No. 11—Extra attachments for attaching umbrella to wagon or tractor platform....Per set, $0.30

Harvester or Machine Attachments

For attaching any of our Umbrellas to binder or plow seat, as shown in cut to the right.
No. 12.....Each, $1.20

High Seat Attachments

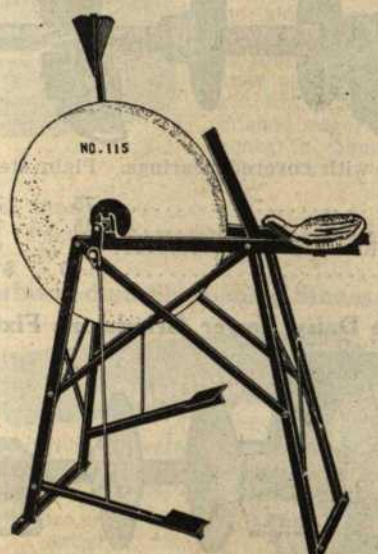
For fastening any of our Umbrellas to wagon spring seats or any high seat where it is impossible to use the floor plate.
No. 13.....Each, $1.80

No. 390—Sterling Tubular Frame Mounted Grindstone

Constructed of 1 1/16 and 1¼-inch diameter, heavy steel tubing, braced securely with heavy material; all rods and bolts are threaded; there are no cotter pins and no loose parts. Permanent rigidity is insured. Provided with a large comfortable seat and clothes protector, all tastefully enameled a rich vermillion. Fitted throughout with malleable iron castings and supplied with Patent Detachable Ball-Bearing Fixtures. Altogether the most substantial and lightest running grindstone made. Set up in less time and with less labor than other grindstone frames, merely by manipulating one bolt. Stone is 19 to 22 inches in diameter and 1¾ to 2¼ inches thick. Shipped knocked down and crated.

No. 390—Approximate weight 100 lbs.....Each, $18.00
No. 93S—Stone and Bushing for same.....Each, $ 7.10

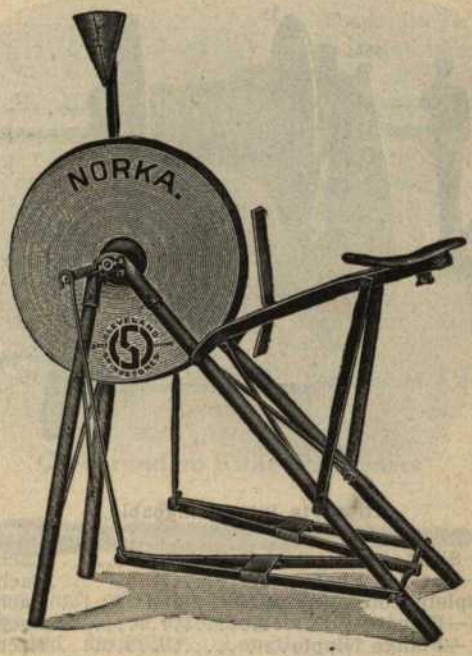
No. 115—Angle Steel Frame Mounted Grindstone



Constructed of 5/8x1-inch angle steel, firmly braced. Fitted with malleable iron detachable fixture and ball-bearing journals, clothes protector and water cup. All finished in black. Stone is 19 to 21 inches in diameter by 1¾ to 2 inches thick. Shipped stone crated and frame knocked down.

No. 115—Approximate weight 75 lbs.....Each, $12.80
No. 115S—Stone and Bushing for same.....Each, $ 7.10

No. 203—Norka Tubular Frame Mounted Grindstone

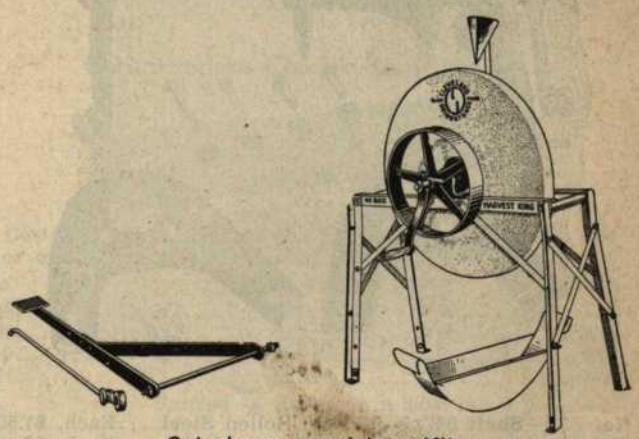


Constructed of 1 1/16-inch heavy steel tubing, strongly braced and held at the top by two heavy steel clamps. Finished in red. Steel axle turns on anti-friction roller bearings. A special bushing holds the stone securely to the axle.

Stone is 19 to 22 inches in diameter and 1¾ to 2¼ inches thick. Shipped knocked down and crated.

No. 203—Approximate weight 100 lbs.....Each, $15.50
No. 203S—Stone and Bushing for same.....Each, $ 7.10

No. 800—Harvest King Mounted Power Grindstone

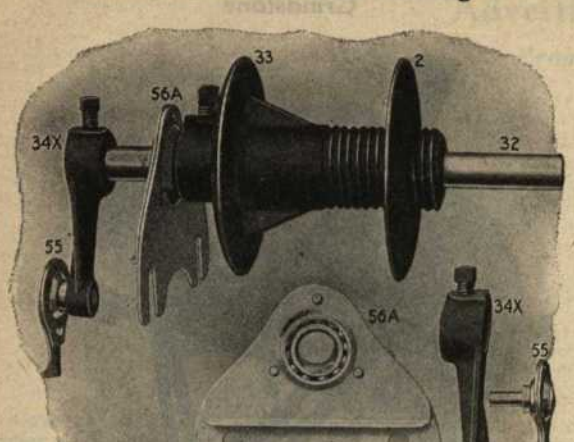


Cut shows complete outfit.

Constructed of 1¼x1¼x⅛-inch heavy angle steel, strongly braced; is equipped regularly with a ⅝-inch shaft, 12x2⅜-inch pulley and heavy steel roller bearings, hand crank and drip cup. Stone is 24 inches in diameter and 1¾ to 2¼ inches thick. Green and black finish. Treadle and trough are extra. The frame is shipped folded complete. The stone is crated separately to save freight.

No. 800—Approximate weight 125 lbs.....Each, $20.50
Treadle and trough not included in above price.
No. 801—Water Trough.....Extra, $ 3.00
No. 802—Treadle, Pitman and Bearing.....Extra, $ 3.00
No. 803—Complete with EXTRAS.....$26.50
Extras are not sent unless specified.

Grindstone Fixtures for Sterling***



All parts interchangeable.

No. 32—Shaft, 8⅞x⅝ Cold Rolled Steel	Each,	$1.50
No. 8—Nut for Shaft	Each,	$0.36
Hub complete, consisting of Nos. 2 and 33	Each,	$2.20
No. 2 —Flange	Each,	$0.60
No. 33 —Flange Nipple	Each,	$1.80
No. 34X—Crank and Set Screw	Each,	$0.60
No. 55 —Pitman Bearing with Balls	Each,	$0.60
No. 56A—Shaft Bearing with Balls	Each,	$0.90
Extra Balls for No. 55	Per set (9),	$0.40
Extra Balls for No. 56A	Per set (12),	$0.40
No. 256—Complete Set	Each,	$2.50

Grindstone Fixtures for Norka***

No. 32—Shaft 9¾x⅝-in. Cold Rolled Steel	Each,	$1.50
Hub complete, consisting of Nos. 2 and 33	Each,	$2.40
No. 33—Flange Nipple with Set Screw	Each,	$1.80
No. 2—Flange	Each,	$0.60
No. G24—Pitman Crank with Set Screw	Each,	$1.50
No. G25—Roller	Each,	$0.30
No. R72—Roller Box, inner half	Each,	$0.60
No. R73—Roller Box, outer half	Each,	$0.60
No. L74—Roller Box, inner half	Each,	$0.60
No. L75—Roller Box, outer half	Each,	$0.60
Complete Sets	Each,	$4.00

If repairs not listed above are wanted, send in the old part as a sample or give us the number and state the name of the Grindstone used on.

Be sure to give number of part wanted on your order, or send in the old part to be duplicated.

Loose Grindstones

Loose, assorted sizes.

In ordering be sure to specify size wanted

8 to 20 lbs	Per 100 lbs., $9.40
20 to 40 lbs	Per 100 lbs., $7.30
40 to 200 lbs	Per 100 lbs., $7.00
Over 200 lbs	Per 100 lbs., $7.80

How to Figure Weight of Grindstones.

Many dealers experience trouble in arriving at the price of loose grindstones because of having to guess at the weight of the various sizes. The following formula has proven to be fairly accurate:

Square the diameter of the stone in inches, then multiply this figure by the thickness in inches. The product should then be multiplied by .06363 and the result will be the weight in pounds.

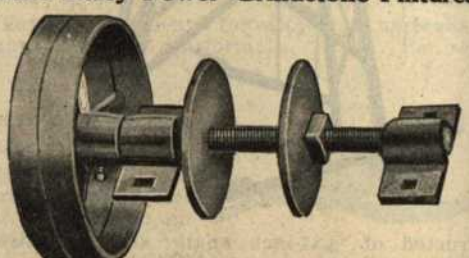
For example, a stone 24 inches in diameter and 2 inches thick weighs approximately 73¼ pounds.
24×24=576×2=1152.
1152×.06363=73.30176 or approximately 73¼ pounds.

Regular Pattern Grindstone Fixtures

Japanned, with covered bearings. Plain steel rollers.

Numbers	75	77	79
Size, inches	15	17	19
Weight set, lbs	5¼	6½	7¼
Per set	$1.40	$1.50	$1.60

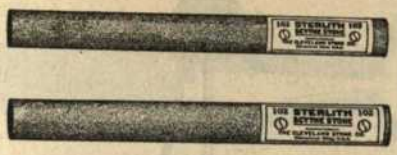
Little Daisy Power Grindstone Fixtures



Has ¾-inch steel shaft, 12 inches long, pulleys 7 inches in diameter and 2-inch face; flanges are 4½ inches in diameter, boxings are 1¾ inches wide. Will take stones up to 4 inches thick, 24 inches in diameter. Weight complete, 10½ lbs.

No. 208 ..... Each, $4.20

Scythe Stones



Sterlith

An artificial abrasive made by the electric furnace process, and is especially sharp. Packed 1 dozen in a very attractive display carton, which is also a shipping carton.

No. 1020—10-inch, weight per dozen, 5½ lbs. Per doz., $5.00
No. 1030—12-inch, weight per dozen, 9 lbs. Per doz., $5.60

Luther

Dimo-Grit Oxide, the ideal substance for honing and sharpening stones. 10 inches long.

No. 252—Weight per dozen 7½ lbs.....Per doz., $4.20

Star

Selected Huron Stone; sand bed finish; 9½ inches long.

No. 19—Weight per dozen 8½ lbs.....Per doz., $2.00

Western Red End

Selected Huron Stone; smooth finish; 9½ inches long.

No. 18—Weight per dozen 6½ lbs.....Per doz., $1.50

Carborundum Round Combination Bench Stones

Particularly adapted to sharpening plane irons or wide chisels. Made with one side coarse grit for taking out nicks and bringing tool to an edge, and the other side of a very fine grit for giving the keen finished edge. Stone is 4 inches in diameter and 1 inch thick.

No. 107—Bench Stone.....Each, 1.25

Packed ¼ dozen in a box.

Carborundum Sharpening Stones

Used dry or with oil or water. Quite porous and may be tempered in cutting by filing. For general use by mechanic or farmer for knives, chisels, etc.

No.	Size, ins.	Grade	Each
115	8x2x1	Fine	1.50
116	8x2x1	Medium	1.50
118	8x2x¾	Fine	1.35
119	8x2x¾	Medium	1.35
121	6x2x1	Fine	1.15
122	6x2x1	Medium	1.15
123	6x2x1	Coarse	1.15
124	6x2x⅝	Fine	.90
125	6x2x⅝	Medium	.90

Packed ½ dozen in a box.

Carborundum Pocket Hones

On Display Stand

These Pocket Hones are made from fine Carborundum powder. For sharpening pocket knives, scissors, ink scratchers and small tools. Hones are 3 inches long, ⅞ inch wide and ⅜ inch thick. Put up 2 dozen on attractive lithographed metal display 10 inches high and 12 inches wide.

No. 149—Pocket Hone Display.....Per card of 2 doz., 4.80

Carborundum Knife Sharpeners

A round shaft of Carborundum, firmly secured to wood handle by a steel rod extending its entire length, gives it strength and durability. Length over all, 13 inches.

No. 76—Weight per dozen 6½ lbs.....Per doz., 6.00

Packed 1 dozen in a display box.

Carborundum Files

One of the handiest of tools for any farmer or mechanic. Excellent for sharpening mower sections, scythes, shovels, hoes, etc. Small end 1¼x1¼x1½; large end 1¼x1½x2⅛; length over all 14 inches.

No. 57—Weight per dozen 14 lbs.....Per doz., 12.00

Packed 1 dozen in a box.

Carborundum Combination Stones

Designed for carpenters and mechanics. Made with one face of coarse and one face of very fine grit.

No.	Size, ins.	Each
108	8x2x1	1.75
109	6x2x1	1.25
110	7x2x1	1.50
111	5x2x¾	1.00

Packed ½ dozen in a box.

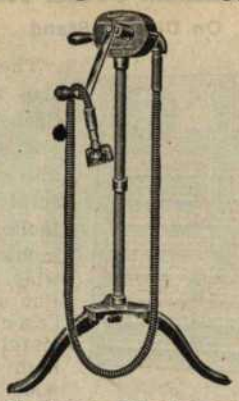
Carborundum Razor Hones

Made of extra fine, hand-washed Carborundum powder. Unexcelled for fast cutting qualities and for producing a keen, lasting edge.

No.	Size, ins.	Each
No. 101A	5x2 x½	1.35
No. 102	4x1½x½	.75
No. 103	4x2 x½	1.15

Packed ½ dozen in a box.

Stewart Ball Bearing Horse Clipping Machine

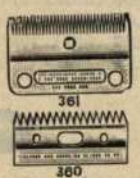


Has strong rigid base; tubular upright. All gears are cut from solid metal and are enclosed in a dust-proof metal box. They run constantly in a bath of oil, which reduces friction to a minimum. All wearing parts are hardened tool steel. New type, light, easy running, flexible shaft 6 feet long. Equipped with the No. B1 Clipping Head. Weight boxed, 36 lbs.

No. 1.....Each, 12.75

Stewart Late Style Cutting Head and Plates

FOR No. 1 HORSE CLIPPING MACHINES.



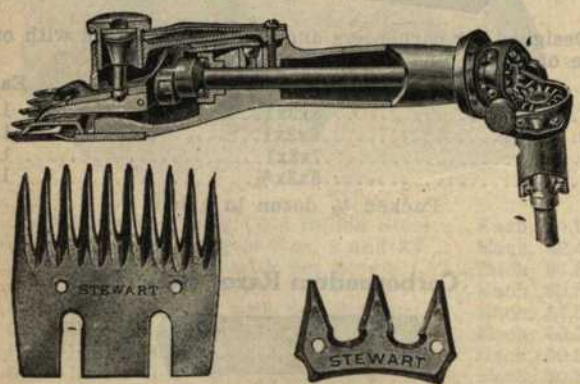
Used with No. 1 Stewart Horse Clipping Machines, since Jan. 1, 1915.

No. B-1—Clipping Head, complete.....Each, 4.00
No. 360—Top Plate.....Each, 1.25
No. 361—Bottom Plate.....Each, 1.75

Heads packed 1 in a box.

Stewart Ball Bearing Cutting Head and Plates

FOR No. 9 SHEEP SHEARING MACHINES.



No. 277 No. 276

Used with No. 9 Stewart Sheep Shearing Machines and will fit no other model. Ball bearings reduce the friction to a minimum.

No. 7—Clipping Head, complete.....Each, 9.50
No. 277—Comb.....Each, .75
No. 276—Cutter.....Each, .25

Heads packed 1 in a box.

Stewart Ball Bearing Sheep Shearing Machine

Frame is similar to No. 1. Universal joints, also the shear head is ball bearing. Equipped with No. 7 Head as shown below. Four sets of knives are included. Especially intended for shearing sheep. Weight boxed, 50 lbs.

No. 9.....Each, 21.00

Stewart Old Style Cutting Head and Plates

FOR No. 1 HORSE CLIPPING MACHINES.

Used with No. 1 Stewart Horse Clipping Machines prior to Jan. 1, 1915.

No. C1—Clipping Head, complete.....Each, 4.00
No. 90—Top Plate.....Each, 1.25
No. 99—Bottom Plate.....Each, 1.75

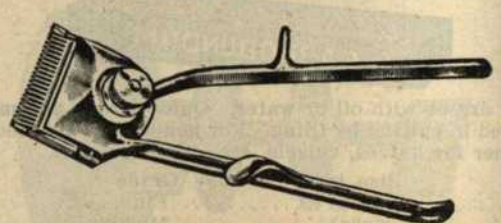
Heads packed 1 in a box.

Hair Clippers

Made with coarse teeth and especially intended for legs and fetlocks of horses or other coarse work.

No. A2.....Each, $3.00

Packed 1 in a box.



Designed to meet the most exacting demands of the barber trade, as well as for home use. Fits the hand comfortably. Has easy, smooth spring action. Cuts close and even. Made only in 00 size.

Easy and close regulation by means of tension spring and thumb screw.

No. A100.....Each, 2.50

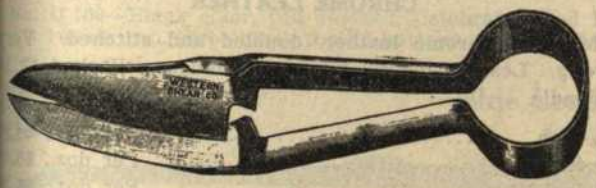
Packed 1 in a box, 6 in a display carton.

Sheep Shears

Extra Quality, Double Bow Full Polished. Bent Blades, 6 inches long; full length 12½ inches. Packed ½ dozen in carton. Weight, per dozen, 12½ lbs.

No. 550.....Per doz., $19.70

Horse and Mule Shears



Full Polished Blades and Shanks. Swaged Blades, 4 inches long. Full length 10 inches. Packed ½ dozen in carton. Weight, per dozen, 7 lbs.

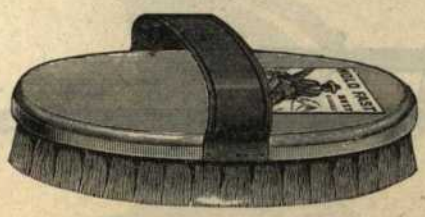
No. 1097.....Per doz., $10.80

For Grass Shears, see index.

Horse Brushes

Palmetto fibre. Wood back, with varnished finish. Packed 1 dozen in carton. Weight, per dozen, 8 lbs.

No. P17.....Doz., $7.20



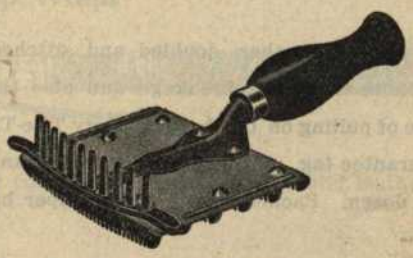
Palmetto fibre. Wood back, with varnished finish. A popular brush. Packed 1 dozen in carton. Weight, per dozen, 9 lbs.

No. R6.....Doz., $9.20

Curry Combs

A two-faced reversible comb, made of fine steel, with the shank passing entirely through the handle and burred over a metal washer. The outside bar is reinforced by a brace riveted to the inside of the bar. It is flexible and very easy on the animal. One of the best sellers on the market. Packed 1 dozen in carton. Weight, per dozen, 6½ lbs.

No. 15.....Per doz., $5.00



Six bars with malleable mane comb. Lacquered finish and enameled handle. Size, 3x4¾ inches. Shank is riveted. Packed 1 dozen in carton. Weight, per dozen, 6½ lbs.

No. 167½.....Per doz., $4.40

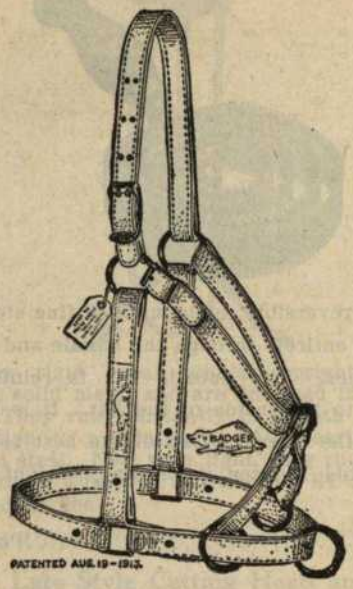
Eight bars pressed steel, lacquered finish. Handle is enameled. Open back. Very popular comb. Shanks extend through bars and handles and are riveted. Packed 1 dozen in carton. Weight, per dozen, 6½ lbs.

No. 088.....Per doz., $3.60

Six bars pressed steel. Lacquered finish. Carmine handle with steel ferrule. Packed 1 dozen in carton. Weight, per dozen, 3½ lbs.

No. 30.....Per doz., $1.50

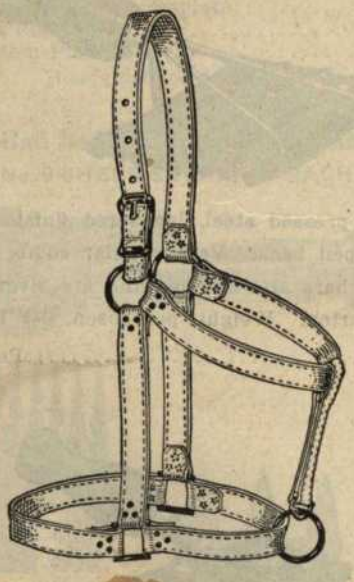
Tite-Tied Halters



Made of chrome leather, doubled and stitched, riveted laps. Guaranteed against breakage and also that it will cure a horse of pulling on the halter. Every Tite-Tied Halter bears a guarantee tag. 1¼-inch weighs 24 lbs. and 1½-inch 30 lbs. per dozen. Packed 6 in a heavy paper bag sealed.

No. 125—1¼-inch. . . . . Per doz., **$37.50**
No. 150—1½-inch. . . . . Per doz., **$45.00**

Special Chrome Halters



Made of chrome leather, doubled and stitched with riveted laps. A very good Halter for the price. Carried in 1¼-inch size only. Weight 17 lbs. per dozen. Packed 6 in a heavy paper bag sealed.

No. 135—1¼-inch. . . . . Per doz., **$26.80**

Hame Straps

TAN OIL FINISH LEATHER

Made of high grade leather, oil finish and tan color. 20 inches long, double riveted. Cut shows leather loops but we furnish with wire loops. Packed 12 in a bundle.

⅞-inch. . . . . Per doz., $4.30
1 -inch. . . . . Per doz., $4.50
1⅛-inch. . . . . Per doz., $5.40

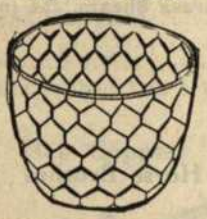
CHROME LEATHER

Made of chrome leather, doubled and stitched. Very strong. Leather loops. Length, 22 inches. Packed 12 in a bundle.

⅞-inch. . . . . Per doz., $4.70
1 -inch. . . . . Per doz., $5.10
1⅛-inch. . . . . Per doz., $5.70

Horse Muzzles

Regular Pattern



Made in two weights of wire for different classes of trade. All are made with a heavy wire around top for strength.

No.	Finish	Mesh Wires	Rim Wire	Per doz.
6	Galvanized	No. 16	No. 10	$2.00
4	Galvanized	No. 18	No. 12	$1.80

Lock Rib Pattern

Showing Lock Rib Construction

This shows the method of locking the mesh wires by clinching hooks over them. Ribs are made of tempered steel wire, flat, so muzzle is smooth inside. Extra heavy wire around the top gives great strength. Black enameled.

No. 76. . . . . Per doz., **$3.70**

Red Rawhide Buggy Whips

No. U 35—Black color, fine finish, Prime Java, one combination button, double cover and waterproof, Philadelphia snap, 6 ft. long. ¼ dozen in bundle.....Per dozen, $5.50

No. 52—Java, black color, smooth finish, round end, loop snap, 5½ ft. long. ¼ dozen in bundle.....Per dozen, $4.00

No. U 50—Black Color, Loaded, rubber cap, 2 long russet buttons, Philadelphia snap. 6 ft. long. ¼ doz. in bundle.Doz., $8.40

No. U 75—Black color, Celebrated Red Rawhide, loaded, waterproof lining, Japanned cap, three fine chased buttons, English braided snap, 6 ft. long. ¼ dozen in bundle.....Per dozen, $10.50

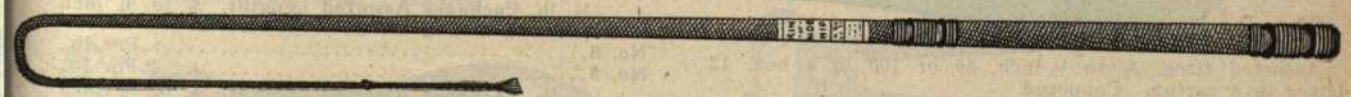
No. U 100—Black color, full stocked, Celebrated Red Rawhide, loaded, double cover and wire plaited undercover, rubber cap, three black thread buttons, reinforced English braided snap, 6 ft. long. ¼ doz. in bundle..Per dozen, $16.80

Blue Leather—Drop Top Whips

No. 35C—Loaded Java Coach, 4-plait blue and black cover, loaded cap. 2 combination buttons, 3-ft. solid leather drop top lining, lace leather snap, 5 ft. long. ¼ dozen in bundle.....Per dozen, $6.00

Binder Whips

No. 1242—Hickory Stock—Ebonized, one-piece, black thread top. 15-ft.—11-ft. stock, 4-ft. drop. ¼ doz. in bundle.Doz., $16.80



No. 683—Hickory Stock—Heavy reed point, black and russet mixed color entire length, one-piece, Japanned cap, two long chased buttons. 15-ft.—11-ft. stock, 4-ft. drop. ¼ dozen in bundle.....Per dozen, $28.50

No. B10—Bamboo Stock—Woven leather filled lash. 15-ft.—10-ft. stock, 5-ft. drop. ¼ dozen in a bundle..Per dozen, $8.50

The "Pony" Riveting Machine

Made of malleable iron, with case-hardened steel working parts, adjusts itself automatically to the different lengths of rivets, fitted for No. 1 tubular or split rivets. Has a pocket for carrying rivets. Packed one in a box.

No. 10—Weight each, 3 lbs.....Per doz., $25.20

The "Rex" Riveting Machine

This is a first-class low-priced riveting machine. Made of malleable iron and steel. Adjusts itself automatically to the different lengths of rivets. Fitted for either No. 1 tubular or split rivets. Packed one in a box.

No. 14—Weight each, 2¾ lbs.....Per doz., $20.80

Farmers' Rivet Sets

No.	To fit Copper Rivets No.	Length ins.	Per dozen
8	8	4¼	$5.20
9	9	4¼	$5.20

½ dozen in a box.

Tubular Rivets

One length to each box, 1000 in box. Coppered. No boxes broken.

Lgth., ins.	Weight per box	Per box of 1000
¼	1 lb. 3 oz.	$2.92
5/16	1 lb. 5 oz.	$2.92
⅜	1 lb. 7 oz.	$3.12
7/16	1 lb. 9 oz.	$3.32
½	1 lb. 13 oz.	$3.52

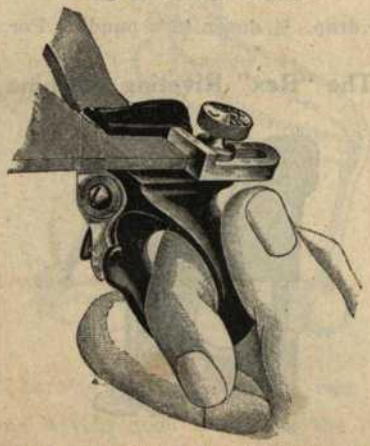
Tubular Rivet Assortments

Assorted sizes, 3/16 to ½-inch, 50 or 100 in a box, 12 boxes in a carton. Coppered.

No. 036 Assortment—In cartons of 12 boxes of 50, a total of 600 rivets.....Per carton, $1.50

No. 039 Assortment—In cartons of 12 boxes of 100, a total of 1,200 rivets.....Per carton, $2.70

Empire Lace Cutter

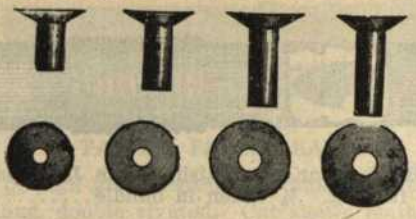


A perfect tool for cutting lace-leather, either thick or thin.

It can easily be adjusted to cut any width lacing from 3/16-inch to ¾-inch. Packed 1 in a box.

No. 7621.....Each, $1.00

Copper Rivets and Burrs



Uniform Lengths, ½ Lb. and 1 Lb. Boxes

Size No.	Length, ins.	1-lb. Boxes, per lb.	½-lb. Boxes, per lb.
8	⅜	.50	.53
8	½	.50	.53
8	⅝	.50	.53
8	¾	.50	.53
8	⅞	.50	.53
8	1	.50	.53
8	1¼	.50	.53
8	1½	.50	.53
9	¼	.52	.55
9	⅜	.52	.55
9	½	.52	.55
9	⅝	.52	.55
9	¾	.52	.55
9	⅞	.52	.55
9	1	.52	.55
9	1¼	.52	.55
9	1½	.52	.55
10	¼	.54	.57
10	⅜	.54	.57
10	½	.54	.57
10	⅝	.54	.57
10	¾	.54	.57
10	1	.54	.57
10	1¼	.54	.57
10	1½	.54	.57
12	¼	.58	.61
12	⅜	.58	.61
12	½	.58	.61
12	⅝	.58	.61
12	¾	.58	.61
12	1	.58	.61

Copper Rivet Assortments

¼ lb. Packages Assorted Lengths, ⅜ to ¾ inch
12 packages in a carton.

No. 8.....Per lb., .58
No. 9.....Per lb., .60

½ lb. Packages Assorted Lengths, ⅜ to ¾ inch
10 packages in a carton.

No. 8.....Per lb., .56
No. 9.....Per lb., .58

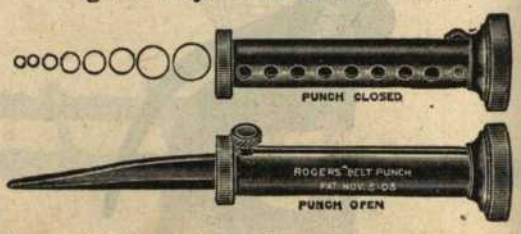
¼ lb. Packages Assorted Lengths, ½ to 1 inch
12 packages in a carton.

No. 8.....Per lb., .58
No. 9.....Per lb., .60

½ lb. Packages Assorted Lengths, ½ to 1 inch
10 packages in a carton.

No. 8.....Per lb., .56
No. 9.....Per lb., .58

Rogers' Adjustable Belt Punches



Can be carried in pocket. Closes like a telescope. Consists of a half round, finely tempered steel blade. cut holes from 1/8 to ½ in.; by moving gauge button up or down, the blade so projects as to enable operator to cut up to ⅜-in. holes by degrees with ease in leather, rubber or canvas belts.

Nickel plated. Packed 1 dozen in a Display Box.

No. 7971.....Per doz., $13.20

Saddlers' Punches

Reamed out so the wads will not stick. Handhold is knurled. Pipe and head are polished.

No.	Size Hole, ins.	Length, ins.	Wgt. Doz., lbs.	Per doz.
101	3/32	3 7/8	1 1/8	$ 6.85
102	7/64	3 7/8	1 1/8	$ 6.85
103	1/8	3 7/8	1 1/8	$ 6.85
104	9/64	3 7/8	1 1/2	$ 8.00
105	5/32	3 7/8	1 1/2	$ 8.00
106	11/64	4 1/8	2 1/4	$ 9.10
107	13/64	4 1/8	2 1/4	$ 9.10
108	7/32	4 1/8	3	$10.25
109	1/4	4 1/8	3	$10.25
110	9/32	4 3/8	4	$11.40
111	5/16	4 3/8	4	$11.40
112	11/32	4 3/8	4	$11.40
113	3/8	4 3/8	5	$14.80
114	13/32	4 3/8	5	$14.80
116	1/2	5	6	$19.40

Packed 1 dozen in a box.

No. 25 Punch Assortment

This assortment consists of one each of sizes 101 to 112, inclusive, packed in round display box.

No. 25 Assortment.....Each, $9.50

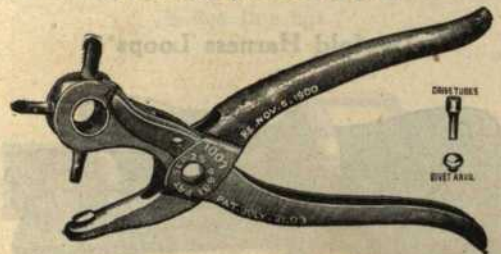
Revolving Belt Punches

Drive Tube.

Side joints, accurately fitted. Full length, 8½ inches. Full Polished. No. 4 equipped with Nos. 4, 6, 7 and 9 drive tubes; No. 6 equipped with Nos. 4, 5, 6, 7, 8 and 9 drive tubes.

No. 4—Four-tube.....Per doz., $20.00
No. 6—Six-tube.....Per doz., $24.00

Packed ½ dozen in a box.



A Serviceable Punch. Spring Action. Full length 8 inches. Bright Steel Finish. No. 384 equipped with Nos. 1, 3, 5, 7 drive tubes. No. 386 equipped with Nos. 1, 2, 3, 4, 5, 7 drive tubes.

No. 384—Four-tube.....Per doz., $18.00
No. 386—Six-tube.....Per doz., $22.00

Packed 1 in a box.

Lothrop's Patent Belt Awl

For lacing leather and rubber belting with any size lacing. Blade 4 inches long.

No. 7629.....Each, $1.00

Heller's Farriers' Pincers

No. 21 —12-inch, ½ dozen in a box.....Each, $3.30
No. 21A—10-inch, ½ dozen in a box.....Each, $2.20

No. 20 —14-inch J. I. C., ½ dozen in a box....Each, $4.40
No. 20B—13-inch, ½ dozen in a box.....Each, $4.00

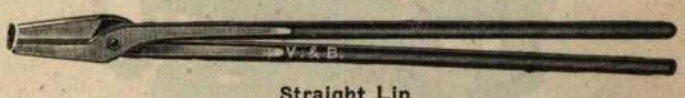
Heller's Cutting Nippers

No. 24C— 8-inch, ½ dozen in a box.....Each, $2.70
No. 24B—10-inch, ½ dozen in a box.....Each, $3.60
No. 24A—12-inch, ½ dozen in a box.....Each, $4.40
No. 24 —14-inch, ½ dozen in a box.....Each, $5.30

Heller's Hoof Parers**

No. 23A—12-inch, ½ dozen in a box.....Each, $4.40
No. 23 —14-inch, ½ dozen in a box.....Each, $5.30

Blacksmith's Tongs



Straight Lip

No.	16	18	20	22	24
Length, ins.	16	18	20	22	24
Per pair	$1.30	$1.40	$1.50	$1.60	$1.70

We make every effort to ship your order the same day received.

Hame Rivets

No. 966D— ⅞ inch long, No. 7 wire.....Per lb., $0.28
No. 966E—1 inch long, No. 7 Wire.....Per lb., $0.28
1 lb. in a package.

Hame Loops

No. 978—1-inch, with screw, Japanned.....Per doz., $1.00
3 doz. in a box.

Hame Staples

No. 962—⅜-inch, polished, with washers....Per doz., $0.60
No. 957—$\frac{7}{16}$-inch, polished, with washers....Per doz., $1.20
2 doz. in a box.

Hame Clips

No. 982—⅜-inch, polished, for wood hames. Per doz., $0.80
2 doz. in a box.

Stober's Repair Clips

No. 1006—⅞-inch, with loop, japanned.....Per doz., $1.00
3 doz. in a box.

Lone Star Hame Hooks

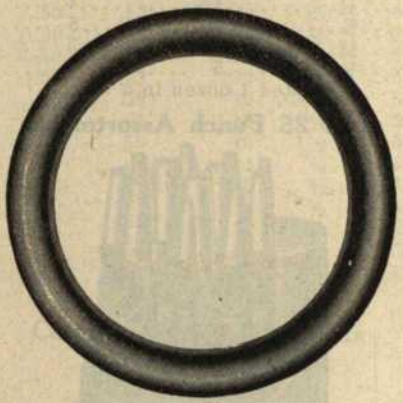
Drop-forged steel. For use on Lone Star Hames.
No. 62—Polished finish.....Per doz., $1.00
1 doz. in a box.

Harness Rings***

No. 7—Japanned.....	D	E	F	G
Diameter, ins.	⅞	1	1⅛	1¼
List per gross.....	$2.04	$2.58	$2.88	$3.42

D to F, 1 gro.; G, ½ gro. in a box.

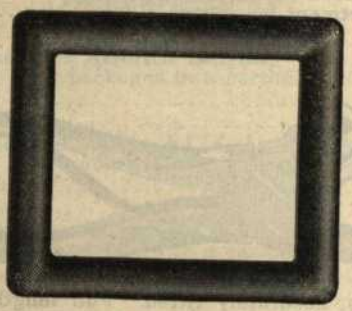
Breeching Rings***



No. 3—Japanned.	H	J	L	N
Diameter, ins.	1⅝	1½	1¾	2
List per gross.....	$4.80	$5.40	$6.15	$6.60

H to L, ½ gro.; N, ¼ gro. in a box.

Halter Squares**

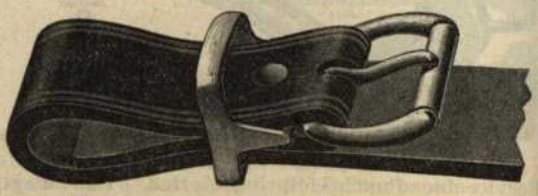


Round wire pattern.

No. 356—Japanned.	D	E	G
Size, ins.	⅞x1⅛	1x1¼	1¼x1½
Per gross.	$2.24	$3.68	$4.28

½ gro. in a box.

Twofold Harness Loops**

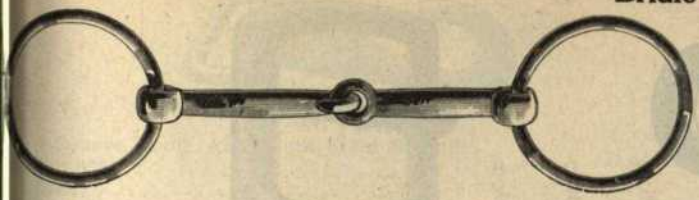


Japanned Finish.

No. 209.....	B	C	D	E	F	G	J
For strap, ins..	⅝	¾	⅞	1	1⅛	1¼	1½
Per gro.	$2.40	$2.80	$3.00	$3.50	$4.00	$4.50	$5.50

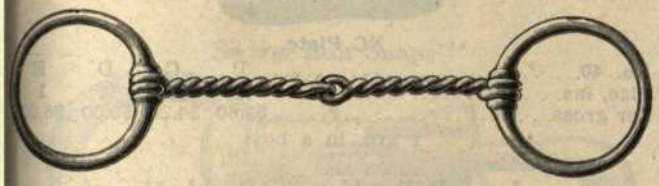
B, C, D, 1 gro.; E, F, G. J, ½ gro. in a box.

Bridle Bits



No. 47½—Jointed, 2¾-inch ring, XC Plate..Per doz., $2.60
1 doz. in a box.

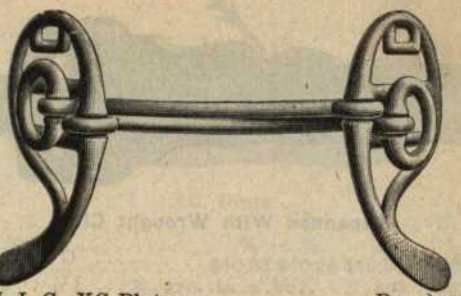
No. 47S—Stiff 2¾-in. ring, XC plate.....Per doz., $2.50
1 doz. in a box.



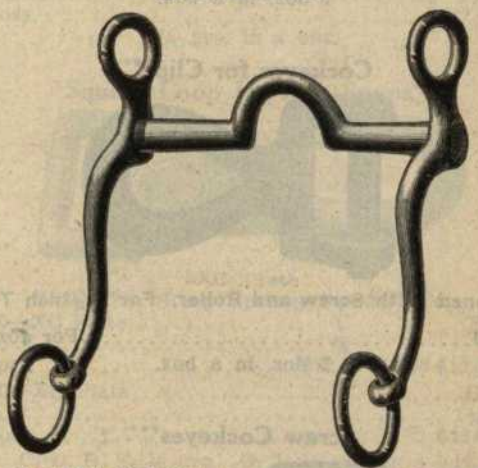
No. 846—Jointed, 2¼-inch ring, XC Plate...Per doz., $3.80
1 doz. in a box.

No. 855—Double Jointed, 2½-inch ring, XC Plate.....Per doz., $5.20
1 doz. in a box.

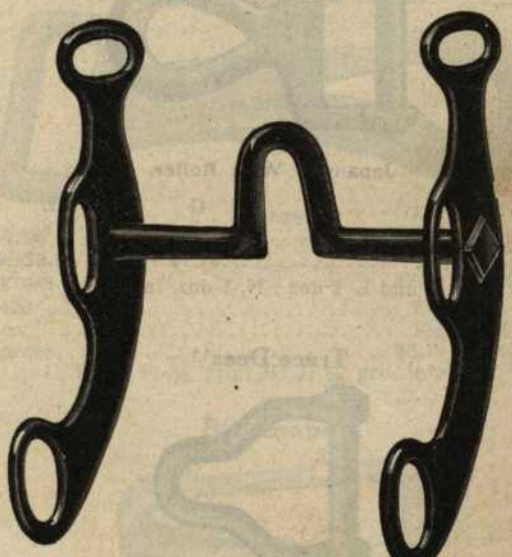
No. 79—Saw Mouth, XC Plate.....Per doz., $13.20
½ doz. in a box.



No. 625—J. I. C., XC Plate.....Per doz., $6.70
½ doz. in a box.

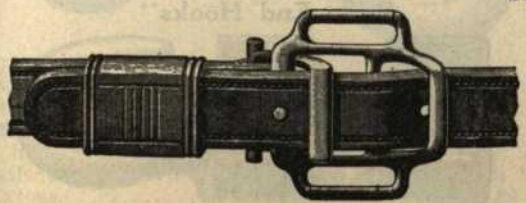


No. 632—Port Bit, XC Plate.....Per doz., $5.50
½ doz. in a box.



No. 602—Mule Bit, Japanned.....Per doz., $5.50
½ doz. in a box.

Trace Buckles



Two Loop. XC Plate.

No. 175.	G	J	L
Size, ins.	1¼	1½	1¾
Per dozen	$2.25	$2.60	$2.90

1 doz. in a box.

No Loop. XC Plate.

No. 176.	G	J	L
Size, ins.	1¼	1½	1¾
Per dozen	$1.90	$2.10	$2.40

1 doz. in a box.

Clip Cockeyes***

Japanned With Wrought Clips.

No. 440	G	J	L
For Trace, ins	1¼	1½	1¾
Per dozen	$1.80	$1.80	$2.16

1 doz. in a box.

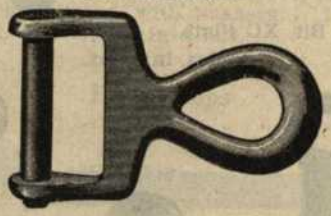
Cockeyes for Clips***

Japanned With Screw and Roller. For 1½-inch Trace.

No. 466J ..... Per doz., $1.05

2 doz. in a box.

Screw Cockeyes***

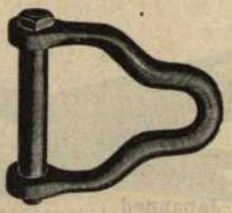


Japanned With Roller.

No. 465	G	J	L	N
For Trace, ins	1¼	1½	1¾	2
Per dozen	$1.14	$1.32	$1.62	$2.04

G, J and L, 2 doz.; N, 1 doz. in a box.

Trace Dees**



Japanned With Bolt and Roller

No. 488	J	L	N	O	P
Size, ins.	1½	1¾	2	2¼	2½
Per dozen	$2.40	$2.72	$3.04	$3.40	$3.80

1 doz. in a box.

Trace Splices

No. 949—Japanned, for team harness ..... Per gro., $8.00

3 doz. in a box.

Barrel Roller Harness Buckles**

XC Plate.

No. 50.	B	C	D	E	F	G	J
Size, ins.	⅝	¾	⅞	1	1⅛	1¼	1½
Per gross.	$3.30	$4.00	$4.60	$5.20	$6.40	$7.60	$9.60

B, C, D, E, 1 gro.; F, G, J, ½ gro. in a box.

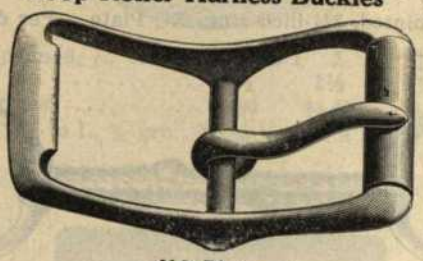
Skate and Bell Strap Roller Buckles**

XC Plate.

No. 40.	B	C	D	E
Size, ins.	⅝	¾	⅞	1
Per gross.	$3.60	$4.20	$5.00	$6.00

1 gro. in a box.

Loop Roller Harness Buckles**

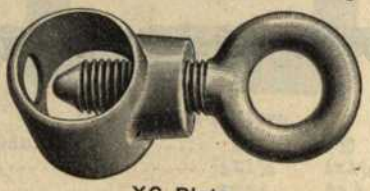


XC Plate.

No. 150.	C	D	E	F	G	J
Size, ins.	¾	⅞	1	1⅛	1¼	1½
Per gross.	$6.20	$7.20	$9.00	$10.80	$13.00	$16.40

C, 1 gro.; D, E, F, ½ gro.; larger, ¼ gro. in a box.

Rope Halter Thimbles and Eyes**



XC Plate

No. 364	A	B
Size, ins.	½	⅝
Per gross.	$11.50	$13.50

3 doz. in a box.

Rope End Hooks**

Japanned

No. 469	A	B	C
Size, ins.	½	⅝	¾
Per gross.	$7.20	$10.32	$12.72

2 doz. in a box.

Bag Snaps**

XC Plate.
Square Loop, Aluminum Steel Spring.

No. 419	A	B	C	D
Inch	½	⅝	¾	⅞
Per gross	$3.60	$3.60	$4.00	$4.40

1 gro. in a box.

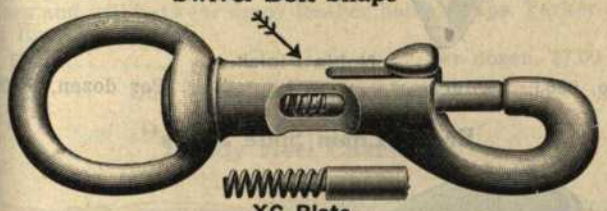
Bull Dog Snaps**

XC Plate.
Swivel Pattern, Round Eye, Steel Tongue.

No. 289	B	C	D	E
Eye, ins	⅝	¾	⅞	1
Per gross	$13.00	$14.60	$16.00	$25.00

B and C, ½ gro.; D and E, ¼ gro. in a box.

Swivel Bolt Snaps***



XC Plate

No. 423.	B	C
Eye, inches.	⅝	¾
Per gross.	$23.70	$27.00

½ gro. in a box.

Dixie Bolt Snaps***

XC Plate

No. 425.	C	D	E	F	G	J
Loop, ins.	¾	⅞	1	1⅛	1¼	1½
Per gross.	$13.14	$13.14	$13.14	$18.00	$21.30	$24.00

C, D, E, ½ gro.; F, G, J, ¼ gro. in a box.

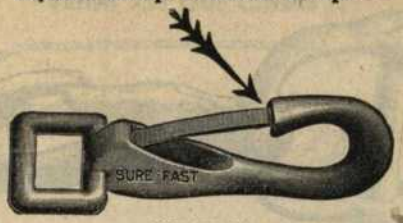
Sandow Bolt Snaps**

XC Plate.
No. 614 is medium weight; No. 647 is heavy pattern. Illustration shows No. 647.

No. 614.	A	AX
Eye, ins.	½	⅝
Length, over all	3¾	4½
Per gross.	$18.80	$23.50
No. 647	**B**	**C**
Eye, ins.	⅝	¾
Length, over all	5¼	6
Per gross.	$49.92	$74.88

No. 614, 3 doz.; No. 647, 1 doz. in a box.

Square Loop Harness Snaps***



XC Plate

No. 290	B	C	D	E	F
Loop, inches.	⅝	¾	⅞	1	1⅛
Per gross.	$10.08	$10.08	$10.08	$10.08	$14.34

½ gro. in a box.

No. 290	G	J
Loop, inches.	1¼	1½
Per gross.	$17.28	$19.20

¼ gro. in a box.

Square Loop Harness Snaps**

XC Plate
With Flat Steep Spring, Square Loop.

No. 420—XC Plate	C	D	E	F
Inches.	¾	⅞	1	1⅛
Per gross.	$12.00	$12.00	$12.00	$16.50
No. 420—XC Plate	**G**	**J**		
Inches.	1¼	1½		
Per gross.	$19.00	$21.00		

C, D, E, F, ½ gro.; G, J, ¼ gro. in a box.

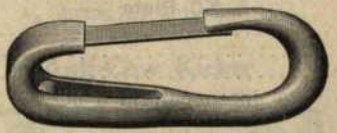
Flat Spring Harness Snaps***

Bronzed

No. 429	C	D	E
Inches.	¾	⅞	1
Per gross.	$7.20	$7.20	$7.20
No. 429.	**F**	**G**	**J**
Inches.	1⅛	1¼	1½
Per gross.	$8.10	$12.60	$16.50

C, D, E, F, ½ gro.; G, J, ¼ gro. in a box.

Bit Snaps**



XC Plate
Aluminum Steel Spring.
No. 421B—Length over all, 2 inches.....Per gross, $8.00
½ gro. in a box.

Chain Snaps**

XC Plate.
No. 583B—Length over all, 5¼ inches.....Per doz., $2.92
1 doz. in a box.

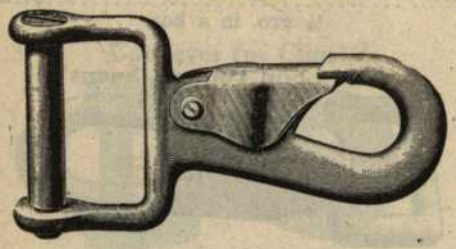
Swivel Trace Snaps**

XC Plate.

No. 448	J	L	N	O	P
Loop, inches	1½	1¾	2	2¼	2½
Per dozen	$4.80	$5.20	$5.60	$6.00	$6.40

One dozen in a box.

Choke Strap Snaps**



XC Plate

No. 447	J	L
Loop, inches	1½	1¾
Per dozen	$1.80	$2.20

One dozen in a box.

Breast Strap Roller Snaps**

XC Plate
Sure Fast—Lock Tongue

No. 439	J	L
Loop, inches	1½	1¾
Per dozen	$6.00	$6.48

One dozen in a box.

Breast Strap Snaps and Buckles***

XC Plate

No. 443	J	L
Loop, inches	1½	1¾
Per dozen pair	$6.75	$8.25

½ dozen pair in a box.

Breast Strap Roller Snaps**

XC Plate

With Choke Strap Loop, furnished in rights and lefts. Regularly furnished in pairs. If ordered singly state which is wanted.

No. 630	J	L	N
Loop, inches	1½	1¾	2
Per dozen pair	$11.00	$12.00	$13.32

¼ dozen pair in a box.

Breast Strap Slides***

Japanned

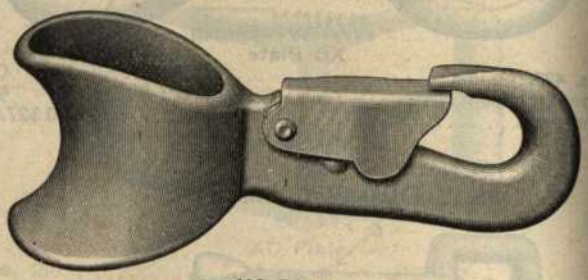
No. 399J—1½-inch.....Per gross, $15.60
1 dozen in a box.

Breast Strap Slides and Snaps**

Nubia Finish

No. 586J—1½-inch.....Per dozen, $4.00
One dozen in a box.

Breast Chain Slide Snaps**



XC Plate.

No. 545—Length, 5¼ inches.....Per dozen, $8.00
One dozen in a box.

Breast Chains
Polished

No. 545 Slide Snap in center and No. 583B Chain Snaps on the ends.

No. 552—Length	28 ins.	32 ins.	36 ins.
Per dozen pairs	$32.00	$36.00	$40.00

Two pairs in a box.

GGG Hame Fasteners

Made of malleable iron, drop forgings, and steel stampings. Very strong. Easy to attach. Nickel finish.

No. 1GGG.....Per dozen, $7.00

½ dozen in a box.

Dodson Hame Fasteners

Strong and secure. Can be adjusted to fit all sizes of collars and will outwear many leather hame straps. Parkerized Rust-proof finish.

No. 53.....Per dozen, $7.00

One dozen in a display box.

Handy Heel Chains

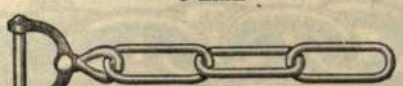
⅝-inch wire, 16 inches long over all. Polished. For plowing and harrowing.

No. 598.....Per dozen pairs, $10.40

1 dozen pair in a bag.

Concord Toggles

6-Link

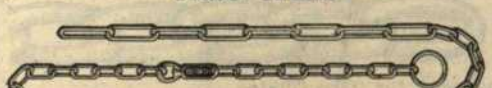


Cut illustrates only 3 links. Our stock consists of 6 links. With rivet and roller. Japanned.

No. 487	J	L	N
Loop, ins	1½	1¾	2
Per dozen	$8.00	$8.50	$8.80

⅓ dozen in a box.

Trace Chains

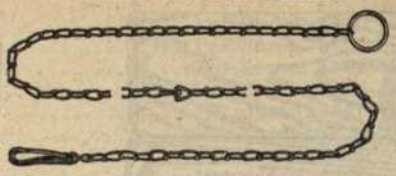


Elweltra grade. Welded straight links.

Lgth. Ft.	No. Links per ft.	Size Link	Size Wire in Links	Approx. Wt. per Pair	Per Pair
7	8	No. 2	¼-in	8 lbs	$1.46
7	8	No. 1	5/16-in	9 lbs	$1.74
7	10	No. 1	5/16-in	10 lbs	$1.86

½ dozen pairs in a bag.

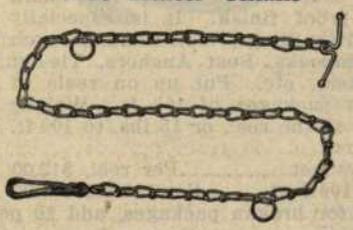
Tenso Tie Out Chains



No. 1/0—20-ft.....Each, $0.90
No. 2/0—30-ft.....Each, $1.30

1 in a bag.

Tenso Halter Chains



No. 2/0—4½-ft.....Per doz., $3.70
No. 2/0—6 -ft.....Per doz., $4.90

½ dozen in a box.

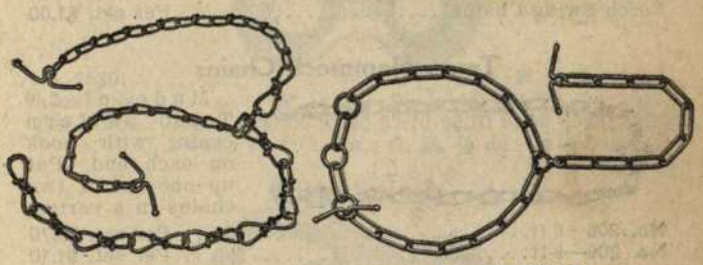
Tenso Dog Chains

Same as Halter Chains, except in size.

No. 6—6-ft. Weight each 4 oz.....Per doz., $3.80
No. 2—6-ft. Weight each 10 oz.....Per doz., $4.20

1 dozen in a box.

Cow Ties



Tenso Electric Weld

Made with swivel and two toggles, of 2/0 Tenso Chain or 2/0 Electric Weld straight link Chain.

No. 2/0—4½-ft. Tenso Chain.....Per doz., $6.00
No. 2/0—4½-ft. Electric Weld Chain.....Per doz., $7.00

½ dozen in a package.

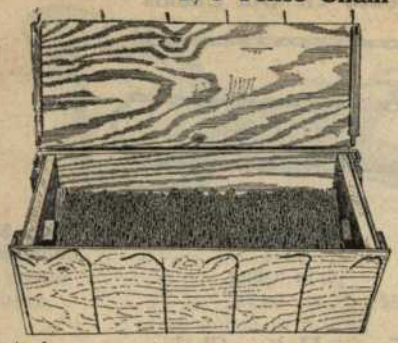
Anti-Cow Kicker

A sure cure for wild, vicious or nervous cows.

No. 713.....Per doz., $16.80

1 in a box, 12 in a carton.

2/0 Tenso Chain



Cut shows exact size of links. This chain is semi-rust-proof finish. It is especially adapted for Hay Slings, Well Chains, Porch Swings, Hammocks, Boat Anchors, Tie-out Chains, Halters, etc. Put up on reels of 250 ft. or in packages of 100 ft. Weighs about 50 lbs. to the reel, or 15 lbs. to 100-ft. package.

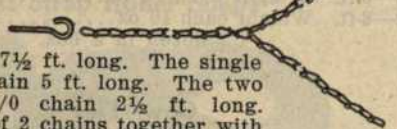
Full reels, 250 feet.....Per reel, $12.00
Packages of 100 feet.....Per 100 ft., $ 5.00

On orders for broken packages, add 20 per cent net to above prices.

2/0 Tenso Chain Parts

2/0 Tenso Snaps.....Each, $0.20
2/0 Tenso Swivels.....Each, $0.10
2/0 Tenso Toggles.....Each, $0.10

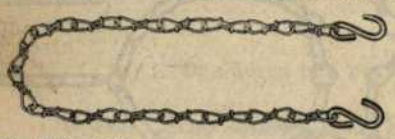
Tenso Porch Swings Chains



Tenso Chain. 7½ ft. long. The single strand is 2/0 chain 5 ft. long. The two branches are 1/0 chain 2½ ft. long. Packed one set of 2 chains together with 2 ceiling hooks in a box.

Porch Swing Chains.....Per set, $1.00

Tenso Hammock Chains



Made of 2/0 Tenso pattern chain, with hook on each end. Put up one set of two chains in a carton.

No. 206—6 ft.....Per set, $0.70
No. 209—9-ft.....Per set, $1.10

Ceiling Hooks

Measurements given are over all.

¼x3½.Per doz., $0.48
⅜x3½.Per doz., $0.52
⅜x4½.Per doz., $0.75

Safety Chain

Put up 12 yards in a box.

1/0 Steel Safety Chain.....Per doz. yds., $1.30
2/0 Steel Safety Chain.....Per doz. yds., $1.10
1/0 Brass Safety Chain.....Per doz. yds., $1.90
2/0 Brass Safety Chain.....Per doz. yds., $1.60

Wind Mill Chain

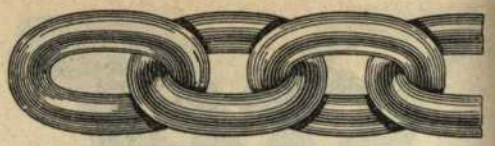
Links ⅞ in. long., ⅝ in. wide. Made of ½ in. wire. Varnish finish. Weight 26 lbs. per 100 ft.

No. 1WM.....Per 100 ft., $15.00

100 feet in a package.

Broken packages, add 20% net to above prices.

Cable Chain



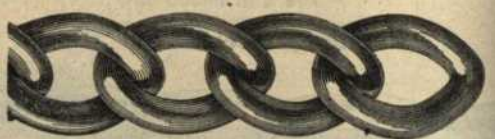
Straight Link, Proof Quality
Self-Colored.

Safe working load should be about one-half the proof-tests. The breaking strain is about double the proof-test.

Size Iron, ins.	Approx. Wt. 100 ft., lbs.	Proof in lbs.	Approx. No. Links to Foot	Per 100 lbs.
⅛	40	1,045	12½	$26.00
¼	70	1,800	12	$24.00
⅜	105	2,720	10¾	$21.50
⅜	158	3,720	9¾	$19.00
⅜	210	5,000	8¾	$18.50
½	275	6,600	8	$18.00
⅝	410	10,000	6⅜	$19.50
¾	580	14,150	5⅝	$19.00
⅞	780	19,200	4¾	$18.50
1	1000	24,800	4⅜	$18.00

Straight Link, B B B Quality
Polished

Size Iron, ins.	Approx. Wt. 100 ft., lbs.	Proof in lbs.	Approx. No. Links to Foot	Per 100 lbs.
¼	78	2,250	14	$28.00
⅜	115	3,400	12	$25.50
⅜	166	4,650	11	$23.00



Twist Link, Proof Quality
Self-Colored. Can be used for Tire Chains.

Size Iron, ins.	Approx. Wt. 100 ft., lbs.	Proof in lbs.	Approx. No. Links to Foot	Per 100 lbs.
¼	75	1,500	11½	$25.50
⅜	124	2,600	10	$23.00
⅜	180	3,600	9½	$20.50

Ajax Steel Loading Chain

Polished

Size Iron ins.	Approx. Wt. 100 ft., lbs.	Approx. Proof Test, lbs.	Approx. Links to Foot	Per 100 lbs.
¼	90	2,400	14¾	$69.00
⅜	130	3,500	12¾	$54.00
⅜	175	4,900	10¾	$43.00
⅜	230	6,500	9½	$41.00
½	290	8,500	8	$38.50

Bright Machine Chain

Can be used for Tire Chains.

Chain No.	Wire Ga. No.	Approx. Wt. 100 ft., lbs.	Approx. Links to Foot	Per 100 ft.
3-0	5	40	15	$17.60
2-0	6	34	16½	$16.90
1-0	7	29	17½	$16.30
1	8	25	20½	$15.60
2	9	21	21	$15.60
3	10	16	21½	$15.60

100 feet in a package.
Broken packages, add 20% net to above prices.

Bright Coil Chain

Chain No.	Wire Ga. No.	Wt. per 100 ft., lbs.	Links to Foot	Per 100 ft.
3-0	5	33	8¾	$11.80
2-0	6	28	8¾	$11.10
1-0	7	23	9¼	$10.40
1	8	20	10	$ 9.80
2	9	16	10½	$ 9.10
3	10	13	10½	$ 9.10

100 feet in a package.
Broken packages, add 20% to above prices.

Log Chains

With Grab and Slip Hook and Swivel. Self-Colored.

No.	Size, ins. and feet	Approx. Wt. Each, lbs.	Per 100 lbs.
512	5/16x12	14	$24.50
514	5/16x14	15	$24.50
516	5/16x16	17	$24.50
612	3/8x12	21	$21.50
614	3/8x14	23	$21.50
616	3/8x16	28	$21.50
812	1/2x12	33	$20.30
814	1/2x14	39	$20.30
816	1/2x16	44	$20.30

Black Wagon Stay Chains

No. 326—5/16x26 inches.....Per pair, $1.50
No. 328—3/8x28 inches.....Per pair, $2.00

Anti-Spreader Chains

Made of Tenso Chain, 2/0, 10 gauge. Prevents box from spreading when heavily loaded.
No. 38—For 38-inch Narrow Track Wagon....Each, $0.50
No. 42—For 42-inch Wide Track Wagon.....Each, $0.60

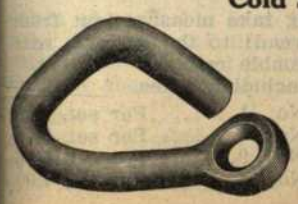
Drop Forged Chain Hooks.

Grab Hooks.

Round Slip Hooks.

No.	For chains, ins.	Weight each, ozs.	Shape	Per 100
1	1/4	4½	Grab	$15.50
2	5/16	8	Grab	$20.00
3	3/8	12	Grab	$27.80
4	7/16	20	Grab	$37.00
5	1/2	32	Grab	$49.50
8	1/4	4	Round	$15.50
9	5/16	6½	Round	$20.00
10	3/4	11½	Round	$27.80
11	7/16	20	Round	$37.00
12	1/2	24	Round	$49.50

Cold Shut Links



Size, ins.
1/4.....Per dozen, $0.90
5/16.....Per dozen, $1.00
3/8.....Per dozen, $1.10
7/16.....Per dozen, $1.20
1/2.....Per dozen, $1.60

Bright Open Rings

Size, ins.
5/16x1½.....Per dozen, $0.90
5/8x1⅝.....Per dozen, $1.10
3/8x2.....Per dozen, $1.22
3/8x2½.....Per dozen, $1.44
½x2.....Per dozen, $2.10
½x2½.....Per dozen, $2.30
½x3.....Per dozen, $2.60
5/8x2½.....Per dozen, $3.80
5/8x3.....Per dozen, $4.20

Bright Open Links

Size, ins.
10-2, 1/4-in. wire.....Per dozen, $0.32
10-1, 5/16-in. wire.....Per dozen, $0.36
5/16x1½.....Per dozen, $0.56
5/16x2.....Per dozen, $0.70
3/4x1⅝.....Per dozen, $0.90
3/8x2.....Per dozen, $0.70
3/8x2½.....Per dozen, $1.10
3/8x3.....Per dozen, $1.20
½x2½.....Per dozen, $1.50
½x3.....Per dozen, $1.60
5/8x3.....Per dozen, $2.70

Self Colored Side Open Links

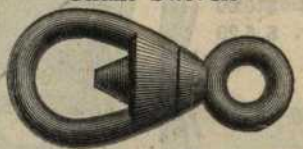
Size, ins.
½x2½..... Per dozen, $1.40
5/8x3..... Per dozen, $2.40

Chain Repair Lap Links

No. 2530	A	B	C	D	F	G	H
Link, ins.	1/4	5/16	3/8	7/16	1/2	5/8	5/8
Per dozen	$1.00	$1.30	$1.70	$2.70	$3.50	$5.00	$6.30

A, B, C, 2 doz.; D, F, 1 doz.; G, H, ½ doz. in a box.

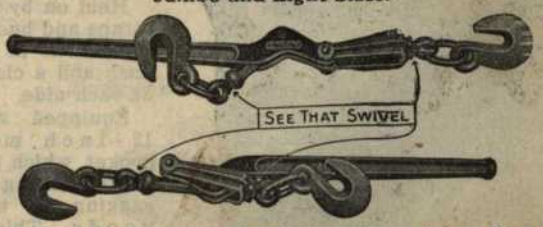
Chain Swivels



No. 7710	B	C	D	E
Eye, ins.	5/16	5/16	3/8	7/16
Length, ins.	2½	2¾	2⅞	3⅛
Weight, per dozen, lbs.	1½	2	3	3½
Per dozen	$1.32	$1.76	$2.60	$3.20

Load Binders

Jumbo and Light Sizes.



Each hook is on a swivel. Made in two sizes. The regular light pattern will handle practically any load but the large pattern will hold all that can be bound with chain up to ½ inch. The light pattern answers all practical purposes. A pair consists of two binders, one for each end of the load. Packed 1 pair in a bundle.
No. 1—Light pattern, weight 15 lbs. pair...Per pair, $ 8.30
No. 2—Jumbo pattern, weight 25 lbs. pair..Per pair, $10.30

Finished Coupling Clips With Bolts**

No.	Eye, ins.		Bolt, ins.	Shnk., ins.	Lgth. Clip, ins.	Per doz. prs.
0A	⅞		1/16	1/16	2½	$12.00
1A	1	light	⅝	1/16	3	$12.00
2B	1	heavy	1/16	1/16	3¼	$13.20
3	1⅛	light	1/16	1/16	3½	$19.68

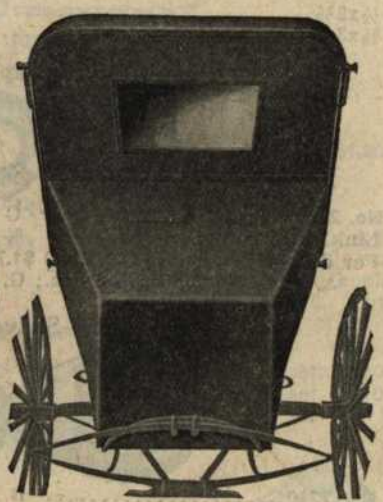
Steel Shaft Ends

Splice Joint

Used for repairing broken buggy shafts; easily put on, makes a strong shaft and looks neat and trim. Made of heavy sheet steel and filled some distance from end with hardwood fillers. Japanned, nickel shaft tips on ends.

No. 91.....Per doz., $ 9.50

Safe Storm Shields



No.	Size, ins.	Fits tops width, ins.	Each
A	36	36 to 38	$10.00
B	38	38 to 41	$10.00
C	40	40 to 43	$10.00
AP	Apron only		$ 6.20

Storm Fronts

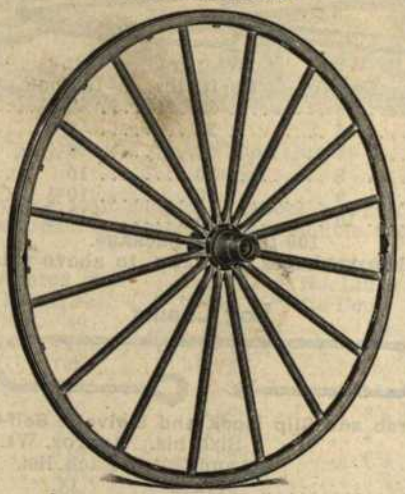
Held on by two straps and buckle, two hooks at the dash and a clamp at each side.

Equipped with 12-inch metal pocket, which prevents tearing or sagging of the goods. This is covered with a broad flap to shed rain, etc. Will fit any ordinary piano box buggy.

	Each
No. 8½....	$7.70

Sarven Patent Wheels, Tired, in the White

Not Guaranteed



We carry only one grade of Wheels. They are good Wheels, but are not guaranteed. All Tired Wheels have round edge steel tires and bolted between each spoke. Fitted with solid front flange, forming point band, back flange extending over rear end of hub, forming sand band. In ordering be sure to specify number, width of tread, height, both front and rear; if to be painted, give color; if boxes are to be set, send in old boxes. All Wheels furnished 3-0, 3-2, 3-4, 3-6, 3-8, 3-10 except Nos. 9 and 13 can also be furnished 2-10 and 4-0 heights.

No.	Rims, ins. Tread	Depth	Spoke, ins.	Hub, ins. Dia.	Length	Tire, ins.	Per set
1.	⅞	1⅛	1 1/16	3 1/16	6½	¼ x ⅞	$25.60
3.	1	1¼	1⅛	3 1/16	6½	¼ x 1	$27.10
9.	1⅛	1⅜	1¼	3⅝	7	1/16 x 1⅛	$34.10
13.	1¼	1½	1⅜	3⅞	7½	⅝ x 1¼	$43.20

For single Wheels or less than full sets, add extra, ea. $ 0.50

BORING HUBS AND SETTING BOXES

We are prepared to bore hubs of all Wheels at the following prices. These prices also include driving the boxes, if so desired. It is necessary to send in the old boxes or order complete new axles, as we will not attempt to set new boxes from our stock in Wheels, for they will not match your old axles.

Nos. 1 to 3.....Per set, $1.50
No. 9.....Per set, $2.00
No. 13.....Per set, $2.50

PAINTING WHEELS

We are prepared to paint Wheels any color desired at a delay from 7 to 10 days. We do not carry Painted Wheels in stock.

Painting and striping.....Per set of four, $5.80
Painting and Striping.....Less than sets, each, $2.30
Painting plain, no stripes.....Per set of four, $4.80
Painting plain, no stripes.....Less than sets, each, $1.60

No. 12—Short Arm Axles

If less than a full set is wanted, specify whether right or left.

To determine length of boxing take measurement from point of axle (not including thread) to the extreme rear end of bearing, including the double collars.

Price is per set of four axles, including boxes.

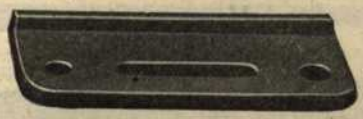
Size, 1/16x6½-inch. For Wheel No. 1.....Per set, 4.50
Size, 1 x6½-inch. For Wheel No. 3.....Per set, 5.00
Size, 1⅛x7 -inch. For Wheel No. 9.....Per set, 5.75
Size, 1¼x7 -inch. For Wheel No. 13.....Per set, 7.00

Steel Rub Irons

No. 3165A—5½ inches long, 2½ inches wide. Per pair, $0.40

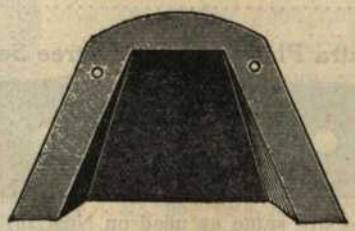
Cast Rub Irons

No. 1—7½ inches long, 2¼ inches wide....Per pair, $0.70



No. 2—6¾ inches long, 2⅛ inches wide...Per pair, $0.70

Palm's Rub Irons



No. 703—Extreme width 10 inches, height 6⅝ inches.....Per pair, $2.00

Improved Cut Under Rub Irons

No. 401—10 inches long, 2¾ inches wide....Per pair, $0.70

Bruce Malleable Bolster Standards

Made of malleable iron, black enameled. Attached to bolster by two bolts through side and one from top to bottom. The standard is held very solid and because of wide base does not wear the wagon box. Weight per set, 20 lbs.

No. 1—3 ins. wide, 14 ins. high.....Per set of 4, $7.60
No. 2—3¼ ins. wide, 14 ins. high.....Per set of 4, $7.60
No. 3—3¼ ins. wide, 10 ins. high.....Per set of 4, $7.60

Flanged Wrought Bolster Plates**

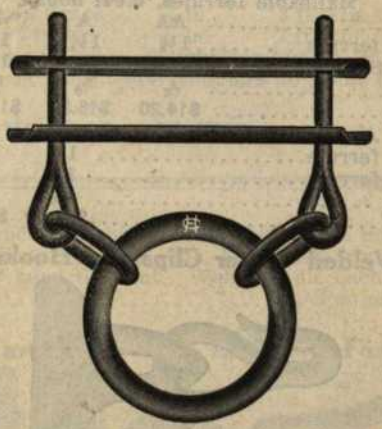
End holes $\frac{7}{16}$ inch. 8 inches center to center of end holes. Length, all sizes, bottom plate 12 inches, top plate 10 inches. Thickness, $\frac{1}{4}$ inches.

No. 3200	D	E	F
Width	3	3¼	3½
For King Bolt	1	1⅛	1⅛
Per pair	$1.40	$1.50	$1.60

Wagon Tongue Caps

No. 3255—Light pattern.....Each, $0.40
No. 3260—Heavy pattern.....Each, $0.48

Neckyoke Center Irons**



No. 3600	A	C	B
Size Eyes	$\frac{7}{16}$	$\frac{7}{16}$	½
Size Links	⅝	⅝	$\frac{7}{16}$
Size Ring	3¼ x $\frac{5}{16}$	3½ x $\frac{5}{16}$	3½ x ⅝
Per 100	$50.00	$54.00	$62.00

Neckyoke Center Plates

Cut Shows Bottom Plate.

Bottom plates with oblong holes, top plates with round holes, center to center of round holes 4¾ inches, holes for $\frac{7}{16}$-inch bolt.
No. 3601A.....Per pair, $0.12

Neckyoke Ferrules and Rings**

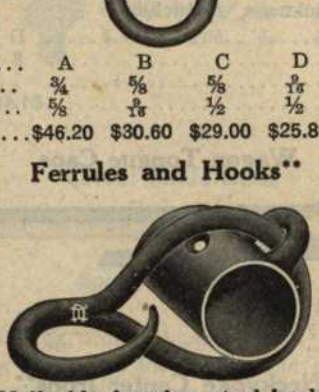
Malleable Ferrules and Steel Rings.

No. 3605	A	B	D	E
Small end of ferrule	1¼	1⅜	1½	1¾
Large end of ferrule	1⅜	1½	1⅝	1⅞
Size ring	⅝	⅝	$\frac{7}{16}$	$\frac{7}{16}$
Per 100	$14.20	$15.40	$19.20	$22.60

Welded Center Clips With Rings**

No. 3520.....	A	B	C	D	F	G
Round part.....	¾	⅝	⅝	9/16	½	7/16
Size ring.....	⅝	9/16	½	½	7/16	⅜
Per 100.....	$46.20	$30.60	$29.00	$25.80	$23.00	$17.00

Ferrules and Hooks**



Malleable ferrules, steel hooks.

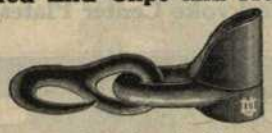
No. 3550.....	AA	A	B	C
Small end ferrule.....	1⅛	1¼	1⅜	1½
Large end ferrule.....	1¼	1⅜	1½	1⅝
Size hook.....	5/16	⅜	⅜	⅜
Per 100.....	$14.20	$15.20	$16.20	$18.20

No. 3550.....	D	E	F
Small end ferrule.....	1½	1⅝	1¾
Large end ferrule.....	1⅝	1¾	1⅞
Size hook.....	7/16	7/16	7/16
Per 100.....	$21.40	$24.40	$26.40

Welded Center Clips and Hooks**

No. 3535.....	A	B
Round part of clip.....	¾	⅝
Size hook.....	⅝	½
Per 100.....	$56.00	$36.00

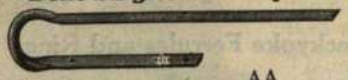
Welded End Clips and Hooks**



Furnished right and left hand, illustration shows left hand. Unless specified on order, we ship half each right and left.

No. 3540.....	C	D	E	F
Round part of clip.....	½	7/16	⅜	5/16
Size hook.....	7/16	⅜	5/16	5/16
Per 100.....	$22.70	$18.00	$15.00	$13.20

Bent Singletree Straps**



No. 3575.....	AA	A	C
Openings.....	1½	1½	2
Round part.....	7/16	½	⅝
Per 100.....	$13.30	$14.30	$19.30

Wrought Singletree Hooks, Small Eye**

No. 3580.....	D	A	B	C
Round part.....	½	7/16	⅜	5/16
Per 100.....	$14.80	$9.20	$7.40	$5.40

McPhail's Singletree Hooks

Nos. 5 and 6 Drop Hook Pattern.

No. 2 One-Piece Pattern.

No.	Diam. of opening, ins.	Weight, per doz. lbs.	Per doz.
5	1¼	3¾	$1.60
6	1⅜	4	$1.70
2	1⅜	3½	$1.50

Steel Hammer Straps

1½-inch drop. Heavy pattern. Diameter large hole ⅝ inch; small hole ½ inch. Distance center to center holes 8¾ inches.

No. 3235A..... Each, $0.24

Extra Plates for Doubletree Sets

These plates are same as used on Nos. 104, 105 and 108 Agricultural Sets. Size 1¼x⅛x6¾ inches, punched for ⅝-inch bolt. 4 pieces in a set.

104-8 Extra Plates..... Per set (4), $0.40

Button Head Steel Wagon King Bolts

No. 3220.....	D	F	H	L
Diam., ins.....	¾	⅞	1	1⅛
Length under head, ins.....	12	14	14	14
Per doz.....	$3.10	$4.70	$6.70	$8.80

Countersunk Head Steel Wagon King Bolts

No. 3220.....	C	E	G	K
Diam., ins.....	¾	⅞	1	1⅛
Length under head, ins.....	12	14	14	14
Per doz.....	$3.10	$4.70	$6.70	$9.80

Wagon Box Side Braces**

Finished complete with two nuts; length is from center of bolt hole to end on a straight line.

No. 3155.....	A	B	C	D
Diam., ins.....	7/16	½	9/16	⅝
Length, ins.....	15½	15½	15½	15½
Per doz.....	$3.84	$4.68	$5.52	$6.78

Plain Wagon Box Straps**

No. 3153	Length Over All, Inches	Length Shank, Inches	Diam. of Shank, Inches	Width of Flat, Inches	Per Set of 8
A	10	3	7/16	3/4	$1.60
C	10	3 1/4	1/2	7/8	$1.90
D	12	3 1/4	1/2	7/8	$2.10
E	14	3 1/4	1/2	7/8	$2.30
F	10	3 1/4	9/16	15/16	$2.10
G	12	3 1/4	9/16	15/16	$2.30
H	14	3 1/4	9/16	15/16	$2.50
K	16	3 1/4	9/16	15/16	$2.70
P	14	3 1/4	5/8	1 1/16	$2.60
S	16	3 1/4	5/8	1 1/16	$2.90
V	18	3 1/4	5/8	1 1/16	$3.20
W	20	3 1/4	5/8	1 1/16	$3.50
Y	24	3 1/4	5/8	1 1/16	$4.10

8 Straps in a set and each set bundled.

Hook Pattern Wagon Box Straps**

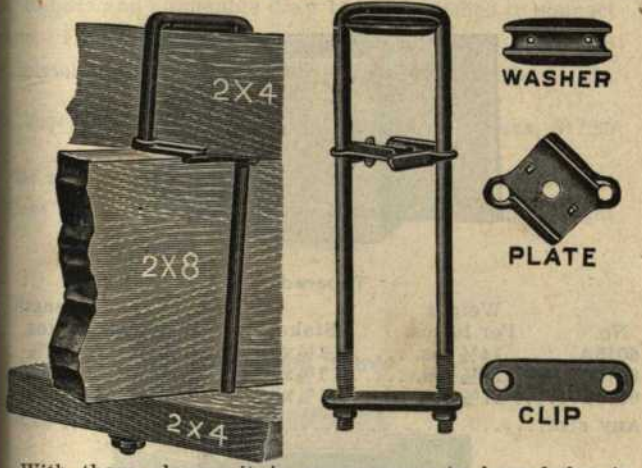
No. 3154	Length Under Hook to Points, Ins.	Length Shank, Ins.	Diam. of Shank, Ins.	Per Set of 8
K	17	3 1/4	5/8	$3.50

Cotton Frame Clamps

Used in making stock racks, cotton racks, wood racks, or wagon racks for any purpose. Complete with washers and nuts. Made of 7/16-inch steel rod. Width inside loop 1¾ inches.

	Per doz.
No. 20— 8½ inches long	$3.36
No. 20—10½ inches long	$3.60

Star Hay Rack Clamps



With these clamps it is unnecessary to bore holes in the main timbers. Holes weaken the timbers and with the Star Clamps full strength is retained. A rack can be built in a very short time. The plate is flanged and will keep the timbers from slipping or twisting. The grooved steel upper washer makes it impossible for the clamp to cut into the cross piece. The lower steel clip keeps the bottom cross piece from splitting.

Clamps made of ⅝-inch wrought iron bolts in four different lengths. Packed one set in a neat wooden box.

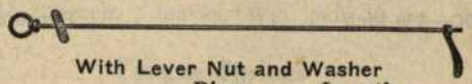
No. 0—12-inch. . . . . Per doz. sets, 20.80
No. 1—14-inch. . . . . Per doz. sets, 22.50
No. 2—16-inch. . . . . Per doz. sets, 24.15
No. 3—18-inch. . . . . Per doz. sets, 25.80

Patent Shoulder Wagon Box Rods

With Wrought Nut and Washer

No.		Diam.	Length	Per 100
3103A	Narrow Track	⅜ in.	3 ft. 3 in.	23.75
3104A	Wide Track	⅜ in.	3 ft. 7 in.	25.35

25 in a bundle. Weight per bundle 38 lbs.
Length is from under shoulder to point of rod.



With Lever Nut and Washer

No.		Diam.	Length	Per 100
3115E	Narrow Track	⅜ in.	3 ft. 3 in.	27.50
3115G	Wide Track	⅜ in.	3 ft. 7 in.	29.10
3115A	Narrow Track	7/16 in.	3 ft. 3 in.	34.50
3115C	Wide Track	7/16 in.	3 ft. 7 in.	36.10

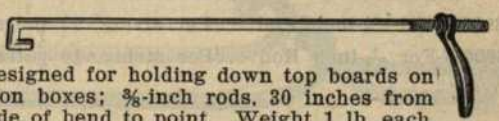
25 in a bundle. Weight per bundle 38 lbs.
Length is from under shoulder to point of rod.

With Self-Centering Round Nut and Washer

No.		Diam.	Length	Per 100
3110E	Narrow Track	⅜ in.	3 ft. 3 in.	26.25
3110G	Wide Track	⅜ in.	3 ft. 7 in.	27.85
3110A	Narrow Track	7/16 in.	3 ft. 3 in.	33.25
3110C	Wide Track	7/16 in.	3 ft. 7 in.	34.85

25 in a bundle. Weight per bundle 38 lbs.
Length is from under shoulder to point of rod.

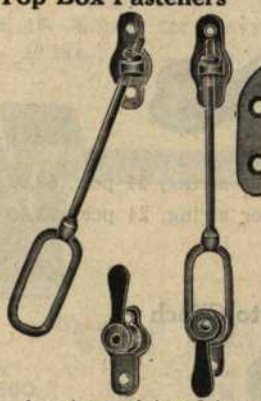
Wagon Box Hold-Down Rods



Designed for holding down top boards on wagon boxes; ⅜-inch rods, 30 inches from inside of bend to point. Weight 1 lb. each.

No. 304. . . . . Per set of 4, $1.30

Top Box Fasteners



A set consists of two complete fasteners.

No. 7187. . Per set, $1.20

End Gate Fasteners

Comstock Pattern.

Furnished threaded with nuts. Plate 2¼ in. long, ⅝ in. slot. Handle 4½ in. long, 1⅛ in. shank, 2⅝ in. from inside of handle to end of shank.

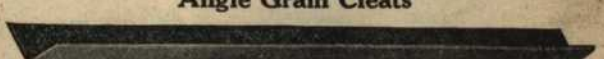
No. 5705. . . . . Per doz. sets, $3.00

Wagon Box Steel

In 14-foot lengths. Holes punched and edges beveled. Made of 13-gauge steel, ¾ inches wide. Weight per length 3 lbs. Regularly put up 50 lbs. in a bundle, but can furnish any quantity.

Wagon Box Steel. . . . . Per 100 lbs., $17.50

Angle Grain Cleats



We can furnish light angles such as are used for wagon box grain cleats, in various sizes, cut to length and with holes punched. Prices on application, or open orders will be billed at price ruling on day of shipment.

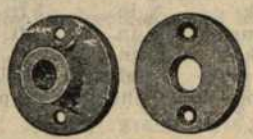
Wrought Seat Hooks

No. 3160B—3 -inch . . . . . Per doz., $1.30
No. 3160C—3½-inch . . . . . Per doz., $1.50

Box Rod Nuts and Washers

In pairs. Nuts threaded, washers blank.

No. 5875B—For ⅜-inch Rod....Per string, 12 pairs, $1.00
No. 5875C—For 7/16-inch Rod....Per string, 12 pairs, $1.30



In pairs. Nuts threaded, washers blank.

No. 5890B—For ⅜-inch Rod....Per string, 10 pairs, $1.10
No. 5890C—For 7/16-inch Rod....Per string, 10 pairs, $1.20

Box Rod Handle Nuts

Threaded.

No 5910B—For ⅜-inch Rod.....Per string, 24 pcs., $3.00
No. 5910C—For 7/16-inch Rod.....Per string, 24 pcs., $3.40

Wagon Box Staples to Clinch

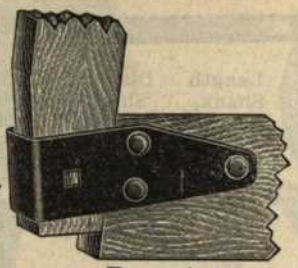
No. 3180C—1¾ inches wide.....Per 100, $5.20
No. 3180D—2 inches wide.....Per 100, $5.20
Packed 100 in a box.

Wagon Tongue Rods

Skew Head.

Size	3/8x24	7/16x26	5/8x24	5/8x26
Each	$0.54	$0.56	$0.60	$0.66

Steel Stake Pockets



Tapered

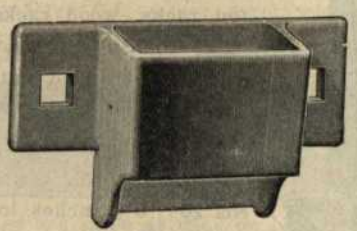
Made of steel, 2½ inches wide, ⅛-inch thick. Will hold a 2x3 or 2x4-inch stake, tapered at lower end. Weight per dozen, 16 lbs.

No. 4920.....Per doz., $4.00

Straight

No.	For stake, ins.	Size steel, ins.	Bolt holes, ins.	Extreme length, ins.	Wgt. per doz., lbs.	Per dozen
3157A	1½x3	2½x⅛	5/16	7½	9	$3.10
3157B	2 x3	2½x⅛	5/16	7½	12	$5.20
993½	1¾x3	2½x3/16	⅜	7¼	12	$4.70

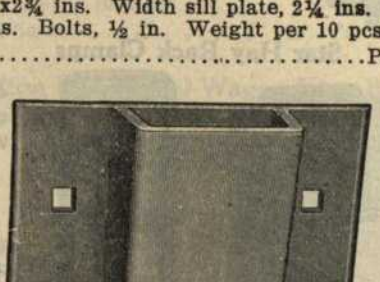
Malleable Stake Pockets



Tapered

Stake, 1⅝x2¾ ins. Width sill plate, 2¼ ins. Length sill plate, 6½ ins. Bolts, ½ in. Weight per 10 pcs. 23 lbs.

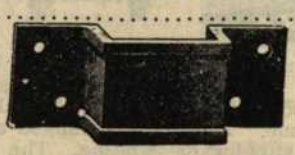
No. 6004C.....Per lb., $0.36



Tapered

No.	Weight Per 10 pcs.	Stake, ins.	Deep, ins.	Length, ins.
6015A	14½ lbs.	1½x2½	2¼	5⅞
6015B	25½ lbs.	1⅝x2¾	3	6¾
6015C	31¾ lbs.	1¾x3	3⅞	7¼

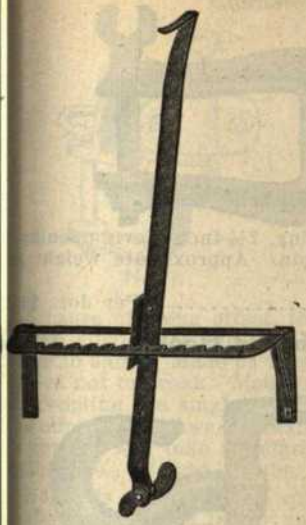
Any size.....Per lb., $0.36



Straight

No.	Weight per 10 pcs.	For stake, ins.	Deep, ins.	Length, ins.
5995A	15 lbs.	1½x2½	2½	7
5595B	19 lbs.	1½x2¾	2¾	7¼
5995C	20 lbs.	1½x3	2¾	7½

Any size.....Per lb., $0.36



Improved Foot Lever Wagon Brakes

Lever 1½x⅜x34 ins. ½-in. hole for brake rod. Projection of post to shoulder 2 ins., with ⅝-in. bolt hole in post. Ratchet 1½x⅝x20 ins. Weight 13 lbs.

No. 3018B.....Each, $3.70

Complete Gear Brakes

Includes Foot Lever Ratchet and Rod.

These gear brake bars are made of the very best selected ...y hickory, and lower brake bar is hung on a special ...haped iron which provides two supports and prevents side ...way. Has adjustable brake block shoes with large blocks. ...eavy roller bar castings are furnished for bolting to ...ounds. The best pattern ratchets are furnished for fasten...g to beds and adjustable draw bar is furnished to connect ...me. Furnished complete with all necessary bolts and ...mpletely painted, striped and varnished. Weight 64 lbs.

...o. 8031.....Each, $17.50

Be sure to give height of rear wheels on your order. ...nless otherwise specified, we furnish for 52-inch height rear wheels.

Cast Lock Shoes

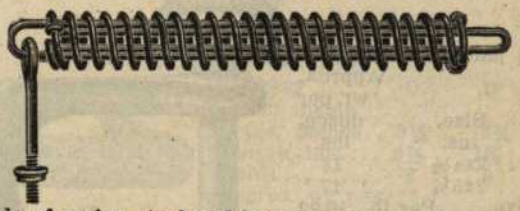
...o.	For	Width, ins. Bottom	Top	Height ins.	Weight Per Pair	Per lb.
...19	Gear Brake	3⅛	3¼	2	3 lbs.	$0.70
...21	Body Brake	3	3⅜	2⅛	3 lbs.	$0.70
...10	Gear Brake	4	3⅝	2½	6 lbs.	$1.60

Wagon Seat Springs

Tempered and Painted.

	Per Pair
No. 152—1½x26-inch, 2 leaves. Wgt. pair 12 lbs.	$3.00
No. 153—1½x28-inch, 3 leaves. Wgt. pair 18 lbs.	$4.30

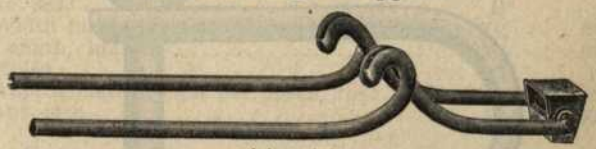
Tongue Springs



Made of spring steel and being a compression spring can not be injured by overloading it. Complete with eye bolt for attaching to pole or tongue.

No. 1A—¼x16 inches. Weight each 3½ lbs....Each, $1.60
No. 3A—⅝x16 inches. Weight each 4 lbs....Each, $1.70

Wagon Tongue Supports

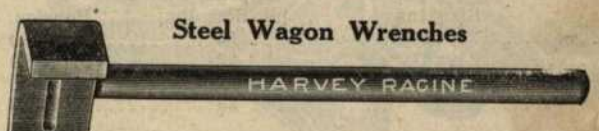


Linquist.

No. 15—⅝-inch inch, for ordinary farm wagons. Wgt. each 8 lbs.....Each, $2.70

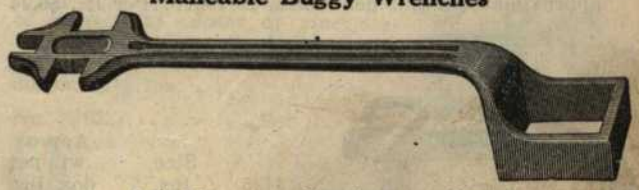
No. 16—¾-inch, for heavy farm wagons. Wgt. each 10 lbs.....Each, $3.50

Steel Wagon Wrenches



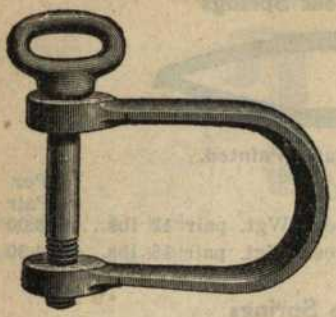
No.	Opening of Wrench, ins.	For Skeins, ins.	Shank, ins.	Lgth., ins.	Wgt. per doz. lbs.	Per doz.
3250D	1⅞	2¾	⅝	9	17	$5.00
3250A	2⅛	3	⅝	9	18	$5.00
3250E	2¼	3¼	⅝	9	19	$5.00
3250F	2⅜	3¼	⅝	9	20	$5.00
3250B	2½	3½	⅝	9	21	$5.00
3250C	2¾	3¾	⅝	9	22	$5.00

Malleable Buggy Wrenches



No.	Axle Nut, ins.	Opening, ins.	Length, ins.	Per doz.
7320A	¾	½, ⅝, ¾	9	$2.30
7320B	⅞	½, ⅝, ¾	9	$2.50
7320C	1	½, ⅝, ¾	9½	$2.60
7320D	1⅛	½, ⅝, ¾	10	$2.70

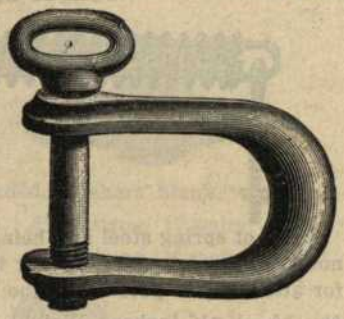
Malleable Clevises



Oval band pattern, screw pin.

No.	Size, ins.	Approx. wt. per dozen, lbs.
395	2 x4½	13
396	2¼x5	17
410	2½x4½	15
420	2 x6	18
427	2¼x6	18
430	2½x6	20
432	2½x8	24
434	3 x8	26

Any size.....Per lb., $0.22

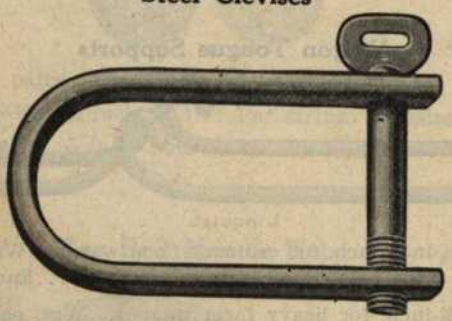


Round pattern, screw pin.

No.	Size, ins.	Approx. wt. per dozen, lbs.
480	2x4½	15
500	2x5¼	17

Any size.....Per lb., $0.22

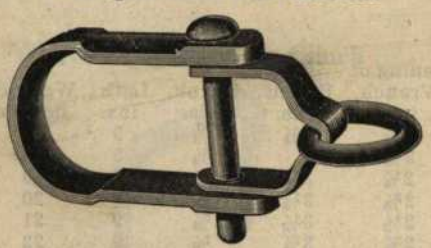
Steel Clevises



Made entirely of steel, screw pin.

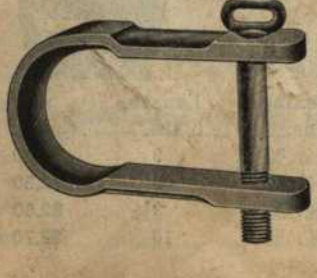
No.	Size, ins.	Approx. wt. per doz., lbs.	Per doz.
3	2 x4½	16	$4.80
6	2¼x6½	22	$5.50
8	2½x6½	23	$6.00
10	3 x8	35	$7.20

Wrought Lock Pin Clevises



No. 3415A—Clevis, Clip and Stay Chain Ring complete, opening in clip for 2-inch doubletree; approximate weight per dozen, 20 lbs....Per lb., $0.24

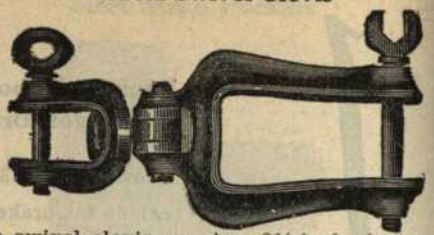
Wrought Screw Pin Clevises



No. 3425	Size, ins.	Approx. wt., per doz., lbs.
A.	2 x4¾	15
C.	2¼x6¼	17¾
D.	2½x6¼	20

Any size.....Per lb., $0.24

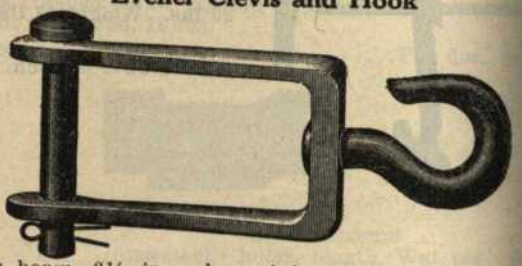
Ideal Swivel Clevis



1⅛-inch swivel clevis opening, 2⅛-inch clevis opening, 4 inches clear from center of pin. Approximate weight per dozen, 24 lbs.

No. 2839B.....Per doz., $6.

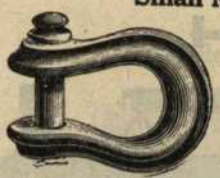
Evener Clevis and Hook



For beam, 2½ in.; clear, 4 in.; entire length, 9¼ in. Swivel Hook. Approximate weight per dozen, 37½ lbs.

No. 2831.....Per lb., $0.2

Small Malleable Clevises



No. 2805—⅞x2⅞ in. Screw Pin.
Approx. wt. per doz., 6 lbs.

No. 2810—1x3½ in., Screw Pin.
Approx. wt. per doz., 11 lbs.

Loop head screw pin.

No. 2820B—¾x4¼ in.
Approx. wt. per doz., 10 lbs.

No. 2819B—¾x4¼ in. Plain Pin.
Approx. wt. per doz., 10 lbs.

No. 2825—¾x4 in. Plain Pin.
App. wt. per doz., 11 lbs.

Small Malleable Clevises, any number.....Per lb., $0.24

Swivel End Clevis

Width at pin end, ¾ inch. 4¾ inches long.
Approx. wt. per doz., 13 lbs.
No. 2824....Per doz., $4.00

Plow Rings

½x3 in.
Approx. wt. per doz., 5 lbs.
No. 2800A..Per doz., $1.50

Duplex Shackles

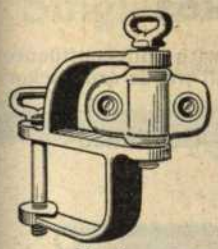
Works with either a straight or side clevis, without the use of a lap link. Made of malleable iron and very strong. Weight each: No. 1, ½ lb.; No. 2, ¾ lb.

Per doz.

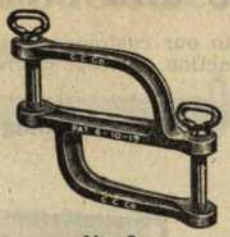
No. 1—For 1 horse hitch...$3.50

No. 2—For 2 and 3 horse hitches. $5.20

Clemens Clevises



No. 1.



No. 2.

Because of being offset, these clevises prevent the ends of the singletrees striking the doubletrees, permitting a horse to shirk. Made of very fine malleable iron and guaranteed not to break. Made in two sizes. No. 1 is intended for coupling the singletree to the doubletree, and includes the clips and screws for fastening the singletree, as shown in cut. It will take standard singletrees and oversize 2x4 doubletree. Weight 4½ lbs. per pair.

No. 2 is intended for coupling the doubletree to the evener bar, and is larger and heavier than the No. 1 but does not include the singletree clips. Takes oversize 2x4 doubletree and oversize 2x6 evener. Weight 5⅛ lbs. per pair.

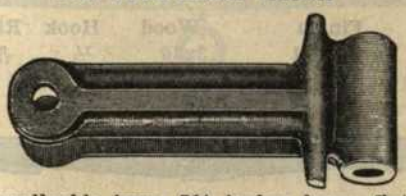
No. 1.....Per pair, $2.20
No. 2.....Per pair, $2.50

No. 0442 Lister Clevis

Made of malleable iron; 8½ inches long over all; width between sides, 2 inches. Weight per dozen, 27 lbs.

No. 0442.....Per doz., $9.00

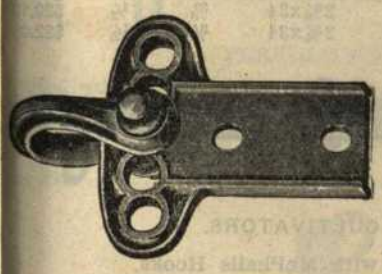
No. A44 Lister Clevis



Made of malleable iron; 7½ inches long; flat part, 1½ inches wide; round part, 2⅝ inches wide; width between sides, 1⅞ inches. Weight per dozen, 26 lbs.

No. A44.....Per doz., $9.00

Double Shovel Plow Clevis



Width, 1⅞ inches; length, 6 inches App. wt. per dz., 12 lbs.

Per doz.
No. 2841B.....$4.00

Cultivator Clevis

Width of beam, ½ in. Center to center of holes, 3⅜ in. Entire length, 7¾ ins. Approx. wt. per doz., 14 lbs.

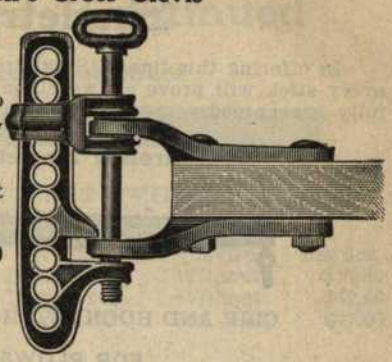
No. 2843B.....Per doz., $4.00

Stowell's Cross Clevis

Adjustable from 2 to 6 inches and will fit any plow.

Approximate weight per dozen, 22 lbs.

No. 8321..Per doz., $6.00



Cross Clevises

No. 2832

No. 2832	C	D	E
Width inside lugs, inches..	3⅛	3¾	4
Length, ins....	6½	7⅝	8½
Holes.....	8	9	10
Approx. wt. per dozen, lbs...	16	17½	18

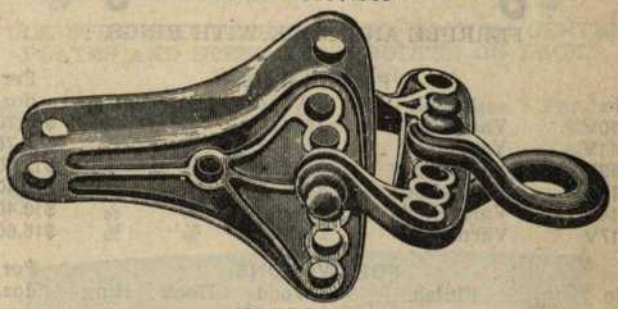
Any size. . .....Per lb., $0.24

No. 2833

No. 2833	B	C
Width inside lugs, inches.....	2¼	3⅜
Length, inches.....	9½	9½
Holes.....	11	11
Approximate weight per dozen, lbs.....	19½	22

Any size. .....Per lb., $0.24

Plow Clevises



Steel Beam

⅝-inch beam, 3⅜ inches center to center of beam holes; ten holes in cross clevis. Approximate weight per dozen, 64 lbs.

No. 2990.....Per lb., $0.24

Wood Beam.

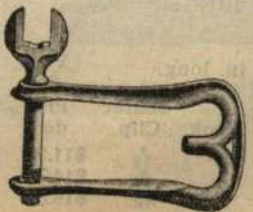
3-inch beam, 4¾ inches center to center of beam holes; ten holes in cross clevis. Approximate weight per dozen, 67½ lbs.

No. 2956.....Per lb., $0.24

Georgia Stock

2¾-inch beam, 4⅛ inches center of wrench to center of pin; 8½-inch length of beam clevis; eight holes. Approximate weight per dozen, 41½ lbs.

No. 2910.....Per lb., $0.24



2-inch beam, 4 inches from center of wrench to end of beam, 5¾ inches long over all. For Georgia Stock. Approximate weight per dozen, 10 lbs.

No. 2835. . .....Per lb., $0.24

Singletrees, Doubletrees and Neckyokes

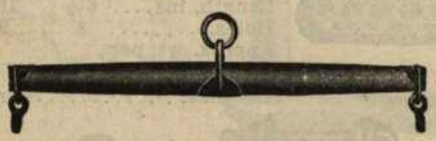
In offering this line of Singletrees, Doubletrees and Neckyokes to our customers, we do so with full confidence that every stick will prove all we claim and give the very best of satisfaction. Except where noted all woods are Hickory and fully guaranteed.

Ironed Singletrees

CLIP AND HOOK, WITHOUT RINGS.

FOR PLOWS.

No.	Finish	Wood	End Hook	Center Clip	Per doz.
203V	Varnished	2⅜x26	⅞	½	$10.20
204V	Varnished	2⅜x28	⅞	½	$10.20



CLIP AND HOOK, WITH RINGS.

FOR PLOWS.

No.	Finish	Wood	End Hook	Center Ring	Per doz.
200V	Varnished	2⅜x26	⅞	1	$11.70
201V	Varnished	2⅜x28	⅞	1	$11.70
202V	Varnished	2⅜x30	⅞	1	$11.70

FERRULE AND HOOK WITH RINGS.

FOR PLOWS.

No.	Finish	Wood	Hook	Ring	Per doz.
210V	Varnished	2⅜x26	⅞	1	$12.70
211V	Varnished	2⅜x28	⅞	1	$12.70
212V	Varnished	2⅜x30	⅞	1	$12.70
213V	Varnished	2½x28	⅜	1	$13.40
214V	Varnished	2½x30	⅜	1	$13.40
217V	Varnished	2¾x30	⅜	½	$16.60

FOR WAGONS.

No.	Finish	Wood	Hook	Ring	Per doz.
220V	Varnished	2⅝x36	⅜	½	$16.50
220R	Ptd. Red	2⅝x36	⅜	½	$17.40
221V	Varnished	2¾x36	⅜	½	$20.30

FERRULE AND HOOK, WITHOUT RINGS.

FOR PLOWS.

No.	Finish	Wood	Hook	Center Clip	Per doz.
215V	Varnished	2⅜x28	⅞	½	$11.20

STRAP END WITHOUT RINGS.

No. 229V has straps 5 in. long.
Nos. 230V and 239V have straps 11 in. long.

FOR PLOWS.

No.	Finish	Wood	Hook	Center Clip	Per doz.
229V	Varnished	2⅜x26	⅞	1	$11.20
230V	Varnished	2⅝x28	⅞	1	$14.70
239V	Varnished	2¾x30	⅜	1	$16.30

Ironed Singletrees—Continued

STRAP END WITH RINGS.

FOR PLOWS.

No.	Finish	Wood	Hook	Ring	Per doz.
190V	Varnished	2½x20	⅞	1	$13.50
192V	Varnished	2⅜x22	⅞	1	$14.00
208V	Varnished	2⅜x26	⅞	1	$14.00
209V	Varnished	2⅜x28	⅞	1	$14.00
218V	Varnished	2⅝x28	⅜	½	$16.40
228V	Varnished	2¾x30	⅜	½	$17.40

FOR WAGONS.

No.	Finish	Wood	Hook	Ring	Per doz.
231V	Varnished	2⅝x34	⅜	½	$18.00
231R	Ptd. Red	2⅝x34	⅜	½	$18.80
232V	Varnished	2¾x34	⅜	½	$20.70
237V	Varnished	2⅝x36	⅜	½	$18.00
238V	Varnished	2¾x36	⅜	½	$20.70

MALLEABLE STRAP END.

FOR WAGONS.

No.	Finish	Wood	Hook	Ring	Per doz.
235V	Varnished	3x36	½	1	$27.70

FULL STRAPPED.

FOR WAGONS.

No.	Finish	Wood	Hook	Ring	Per doz.
250V	Varnished	2⅝x34	⅜	½	$19.20
250R	Ptd. Red	2⅝x34	⅜	½	$20.10
251V	Varnished	2¾x34	⅜	½	$22.00

FOR CULTIVATORS.

Oak Woods with McPhails Hooks.

WITH HOOK BOLT.

No.	Finish	Wood	Hooks	Per doz.
256V	Varnished	1⅝x2¼x28	1⅜	$7.40

WITHOUT HOOK BOLT.

No.	Finish	Wood	Hooks	Per doz.
257V	Varnished	1⅝x2¼x28	1⅜	$6.50

Singletrees, Doubletrees and Neckyokes—Continued

Ironed Neckyokes

WITH REGULAR CENTER PLATES.

No.	Finish	Wood	End Rings	Center Ring	Per doz.
301V	Varnished	2⅝x40	⅜	⅛x3¼	$24.30
301R	Ptd. Red	2⅝x40	⅜	⅛x3¼	$25.20
301AV	Varnished	2⅝x40	⅜	⅛x3½	$24.80
302V	Varnished	2¾x44	7/16	⅛x3¼	$31.90
303V	Varnished	3 x48	7/16	⅝x3½	$41.10

WITH LONG CENTER PLATES.

No.	Finish	Wood	End Rings	Center Ring	Per doz.
311V	Varnished	2⅝x40	⅜	⅛x3¼	$27.10
311R	Ptd. Red	2⅝x40	⅜	⅛x3¼	$27.60
312V	Varnished	2¾x44	7/16	⅛x3¼	$34.30

OAK WOODS WITH DOUBLE EYE BOLT.

No.	Finish	Wood	Per doz.
321V	Varnished	2½x42	$19.40

OAK WOODS WITH EYE BOLT AND RING.

No.	Finish	Wood	Per doz.
320V	Varnished	2½x42	$20.70

Jack Yokes

FERRULE END.

Used extensively in the oil field regions. They are used in connection with No. 303 Wagon Neck Yokes. Woods 2½x20 ins. ⅜ inch end rings. Hook Bolt in center. Varnished.

No. 330V. . . . . Per doz., $11.00

STRAP END

Woods 2½x22 ins. Varnished. ⅜ in. end rings. Safety hook in the center.

No. 332V. . . . . Per doz., $17.00

Ironed Doubletrees

FLAT PLOW, WITHOUT CENTER PLATES. RIVETED ENDS.

No.	Finish	Wood	Clevises	Per doz.
500V	Varnished	1¾x3½x42	Without	$11.80
500R	Ptd. Red	1¾x3½x42	Without	$12.40
501V	Varnished	1¾x3½x42	No. 395	$17.00

FLAT WAGON, WITH TOP AND BOTTOM CENTER PLATES. RIVETED ENDS.

No.	Finish	Wood	Clevises	Per doz.
505V	Varnished	2 x4 x48	Without	$16.40
505R	Ptd. Red	2 x4 x48	Without	$17.30
506V	Varnished	2 x4 x48	No. 395	$21.50
506R	Ptd. Red	2 x4 x48	No. 395	$22.50
508V	Varnished	2 x4 x48	No. 3415A	$24.50
508R	Ptd. Red	2 x4 x48	No. 3415A	$25.40
512V	Varnished	2 x4½x48	Without	$19.20
513V	Varnished	2 x4½x48	No. 395	$24.40
514V	Varnished	2 x4½x48	No. 3415A	$27.30
515V	Varnished	2¼x4¼x50	Without	$23.20
516V	Varnished	2¼x4¼x50	No. 427	$30.50
518V	Varnished	2½x4½x52	Without	$26.90
519V	Varnished	2½x4½x52	No. 430	$34.30

FULL STRAPPED WITH TOP AND BOTTOM CENTER PLATES AND STEEL STRIP BOLTED ON BACK. RIVETED ENDS.

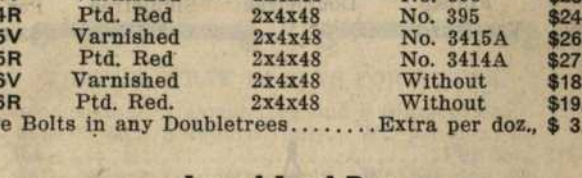
No.	Finish	Wood	Clevises	Per doz.
527V	Varnished	2x4x48	Without	$21.80
527R	Ptd. Red	2x4x48	Without	$22.70
528V	Varnished	2x4x48	No. 3415A	$29.90
528R	Ptd. Red	2x4x48	No. 3415A	$30.80

WITH IRON CENTER, NO HOLE IN CENTER OF WOOD. RIVETED ENDS.

No.	Finish	Wood	Clevises	Per doz.
524V	Varnished	2x4x48	No. 395	$23.40
524R	Ptd. Red	2x4x48	No. 395	$24.30
525V	Varnished	2x4x48	No. 3415A	$26.30
525R	Ptd. Red	2x4x48	No. 3414A	$27.20
526V	Varnished	2x4x48	Without	$18.20
526R	Ptd. Red.	2x4x48	Without	$19.10

Eye Bolts in any Doubletrees. . . . . Extra per doz., $ 3.30

Ironed Lead Bars



STRAP END WITH SAFETY HOOK.

Varnished only.

No.	Wood	End Hooks	Center Clip	Center Hook	Per doz.
536V	3½x40	7/16	¾	¾	$37.40

Ironed Lead Bars—Continued

STRAP END WITH HOOK.

No.	Finish	Wood	End Hooks	Center Clip	Hook	Per doz.
532V	Varnished	2⅝x36	⅜	9/16	½	$19.20
534V	Varnished	3 x36	7/16	⅝	½	$23.80

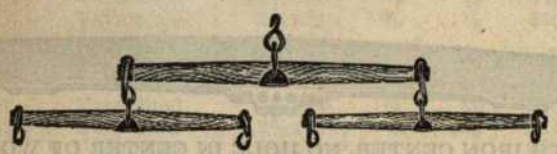
FERRULE END WITH HOOK.

No.	Finish	Wood	End Clip	Center Clip	Hook	Per doz.
531V	Varnished	2¾x36	⅜	⅝	½	$21.20

CLIP END WITH HOOK.

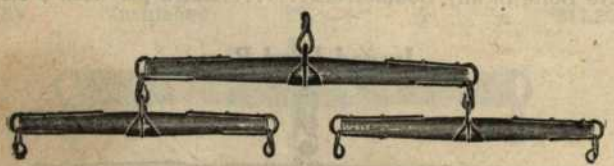
No.	Finish	Wood	End Clip	Center Clip	Hook	Per doz.
530V	Varnished	2⅝x36	½	⅝	½	$15.50

Lead Bar Sets



REGULAR FERRULE AND HOOK PATTERN.

No.	Finish	No. of Doubletree	No. of Singletree	Per set
130V	Varnished	531V	215V	$3.60

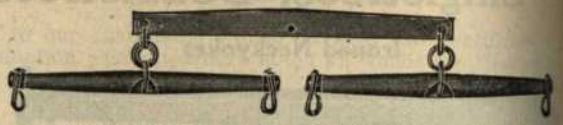


STRAP END PATTERN.

No. 136V has Safety Hook Doubletree.

No.	Finish	No. of Doubletree	No. of Singletree	Per set
132V	Varnished	532V	229V	$3.50
134V	Varnished	534V	230V	$4.50
136V	Varnished	536V	239V	$5.90

Doubletree Sets



REGULAR FERRULE AND HOOK SET.

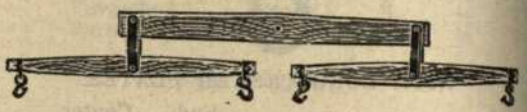
Doubletrees 1¾x3½x42. Singletrees 2⅜x30. Complete with Clevises.

No. 90—Painted . . . . . Per set, $3.70
No. 92—Varnished only. . . . . Per set, $3.60

STRAP END SET.

Same as above except with 2⅜x28 Strap End Singletrees.

No. 94—Painted . . . . . Per set, $3.90
No. 96—Varnished only. . . . . Per set, $3.80



AGRICULTURAL.

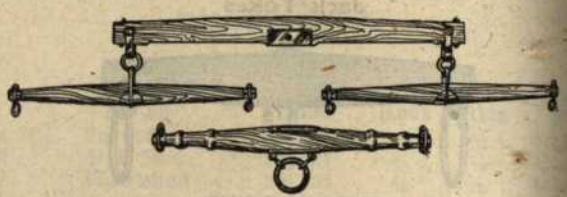
No.	Finish	Doubletree	Singletree	Per set
104V	Varnished	1⅝x3½x36	2¼x28	$2.60
105V	Varnished	1⅝x3½x42	2¼x28	$2.70

FOR LISTERS.

Doubletree, 1¾x3½x48 in., with three holes, making 40, 42 and 44 ins. center to center of holes. Singletrees are 2¼x28 ins.

No. 108V—Varnished . . . . . Per set, $2.90

Wagon Sets



FERRULE END WAGON SETS.

These Sets consist of Doubletrees, 2x4x48; Singletrees, 2⅝x36 Ferrule and Hook; Neckyoke, 2⅝x40; complete with clevises.

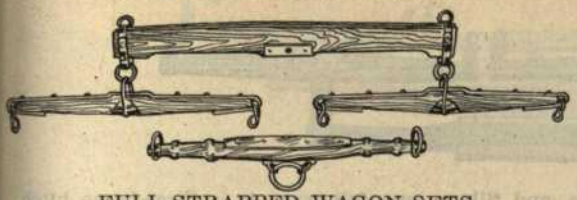
No.	Finish	Style Clevises	Per set
70	Painted	No. 395	$6.90
71	Painted	No. 3415A	$7.10
72	Varnished	No. 395	$6.50
73	Varnished	No. 3415A	$6.70

STRAP END WAGON SETS.

Doubletree, 2x4x48; Singletrees, 2⅝x34 Strap End; Neckyoke, 2⅝x40; complete with clevises.

No.	Finish	Style Clevises	Per set
74	Painted	No. 395	$7.10
75	Painted	No. 3415A	$7.30
76	Varnished	No. 395	$6.90
77	Varnished	No. 3415A	$7.00

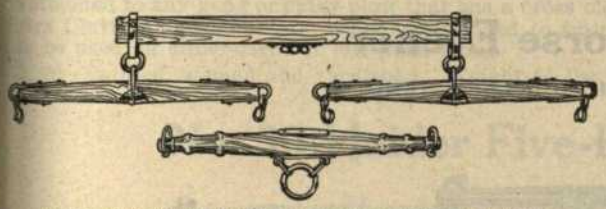
Wagon Sets—Continued



FULL STRAPPED WAGON SETS

Doubletree, 2x4x48, with steel strap riveted entire length of back. Singletrees, 2⅝x34, full strapped. Neckyoke, 2⅝x40. Complete with Clevises No. 3415A.

No. 78—Painted . . . . . Per set, $8.20
No. 79—Varnished . . . . . Per set, $7.90



IRON CENTER STRAP END WAGON SETS.

Doubletree, 2x4x48, with Iron Center. Singletrees, 2⅝x3 Strap End. Neckyoke, 2⅝x40. Complete with clevises.

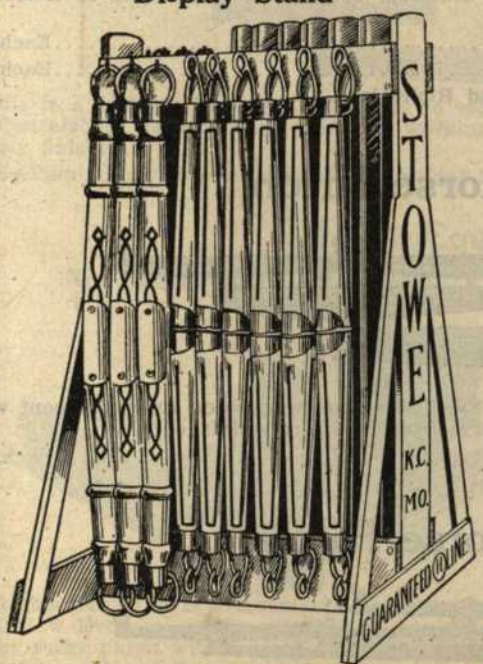
No.	Finish	Style Clevises	Per set
80	Painted	No. 395	$7.30
81	Painted	No. 3415A	$7.50
82	Varnished	No. 395	$7.00
83	Varnished	No. 3415A	$7.20

IRON CENTER FERRULE AND HOOK WAGON SETS.

Same as above, except Singletrees have Ferrules and Hooks.

No.	Finish	Style Clevises	Per set
84	Painted	No. 395	$7.10
85	Painted	No. 3415A	$7.30
86	Varnished	No. 395	$6.70
87	Varnished	No. 3415A	$7.00

Display Stand



FOR DOUBLETREE SETS

This is a very attractive stand and a big help in selling Wagon Doubletree Sets or separate Singletrees, Doubletrees and Neckyokes, and will increase your sales.

Painted red with yellow lettering.

Display Stand for Doubletree Sets. Wgt. 28 lbs. Each, $2.40

Wagon Sets in Crates

No. 710 Crate—Containing six No. 71 Sets. Per crate, $42.00

No. 750 Crate—Containing six No. 75 Sets. Per crate, $42.00

No. 780 Crate—Containing six No. 78 Sets. Per crate, $49.30

No. 810 Crate—Containing six No. 81 Sets. Per crate, $45.00

No. 850 Crate—Containing six No. 85 Sets. Per crate, $43.60

For full description of above numbers, see first column of previous page. Weight approximately 240 lbs. per crate.

McCoy's Two and Three-Horse Equalizer

The Evener Bar is select seasoned hickory. Singletrees are 28 inches long. Equalizer bars are soft steel and the clips and clevises malleable iron. Can be very easily changed from tripletree to doubletree by removing the irons and hooking a singletree in each eye-bolt at the ends of evener bar. Weight complete equalizer 34 lbs.

No. 100—McCoy Equalizer, complete . . . . . Each, $ 9.30
No. 160—Extra Singletrees, only . . . . . Per doz., $11.50

Repairs for McCoy Equalizers

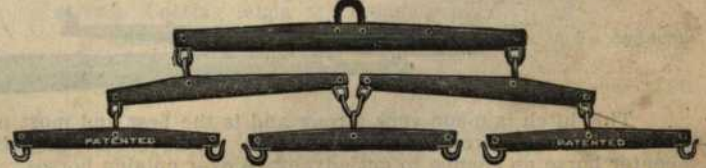
H1—Center Hook for Singletree . . . . . Each, $0.50
H2—Center Hook for Doubletree . . . . . Each, $1.00
H3—Small Clevis for H7 Connecting Iron . . . . Each, $0.25
H5—Eye Bolt . . . . . Each, $0.50
H6—Small Clevis Connecting Singletrees to end of Evener . . . . . Each, $0.30
H7—Malleable Connecting Iron for connecting Steel Evener Bars . . . . . Each, $0.75

"U" Bar Steel Singletrees, Doubletrees and Tripletrees

DOUBLETREE IN SETS FOR PLOWS.

Set consists of 1 Doubletree and 2 Singletrees.

No. 26S—26-inch Singletree only. Wt. per doz., 52 lbs. . . . . Per doz., $14.40
No. 36D—36-inch Doubletree only. Wt. per doz., 88 lbs. . . . . Per doz., $22.00
No. 37—Doubletree Set. Wt. per set, 22 lbs. . . . . Per doz. sets, $51.20

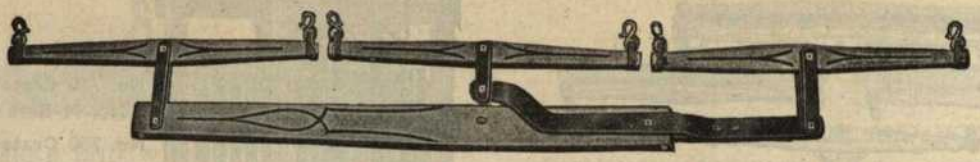


TRIPLETREES FOR WALKING AND SULKY PLOWS.

Evener bar, 42 ins.; Singletrees, 26 ins.

No. 40S—Weight per set, 35 lbs. . . . . Per set, $10.50

No. 50 Heider Three-horse Hitch



This Hitch is made very strong, simple, light, neat and durable, and fills a long felt want in a three-horse hitch. It is so constructed that one horse cannot get the advantage over the others and the end of the iron evener that the center horse pulls on, is raised sufficiently to work over clevis pin. Makes a very practical hitch for general use, such as plows, harrows, etc., or any implement on which a three-horse hitch is used.

No. 50—Painted, striped and varnished. Weight 30 lbs.....Each, $7.00

Heider Three-horse Evener

FURNISHED EITHER RIGHT OR LEFT HAND

Be sure to state on your order whether Right Hand or Left Hand is wanted.

CUT SHOWS RIGHT HAND EQUALIZER

This Three-Horse Wagon Evener can be used on any wagon, dray, manure spreader, seeder, etc., in fact for anything with a pole where necessary to use three horses with one horse on one side of the pole and two on the other. Made very simple, strong and durable, easy to attach. To use this Evener requires no longer pole than for a two-horse evener, as it attaches at the same point that a two-horse evener would.

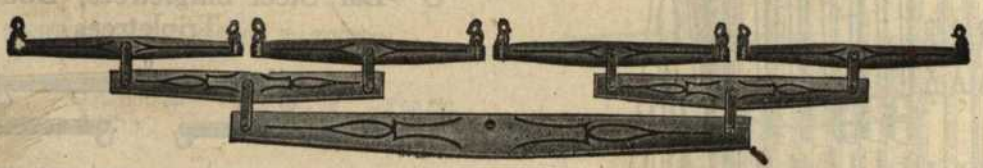
Furnished Right or Left Hand. Left-hand is made to work two horses on the left-hand side of the tongue. Right-hand is made to work two horses on the right-hand side of the tongue. In ordering, specify whether Right or Left-Hand is wanted.

No. 40R—Right Hand, painted, striped and varnished. Weight 45 lbs.....Each, $10.00

No. 40L—Left Hand, painted, striped and varnished. Weight 45 lbs.....Each, $10.00

Unless otherwise ordered, we send Right-Hand.

No. 1 Heider Four-horse Hitch



This Hitch is made with standard size eveners and singletrees. Can be used on wagons or any implement where a 4-horse hitch is required, such as harrows, disc harrows, etc. Made very strong and nicely finished.

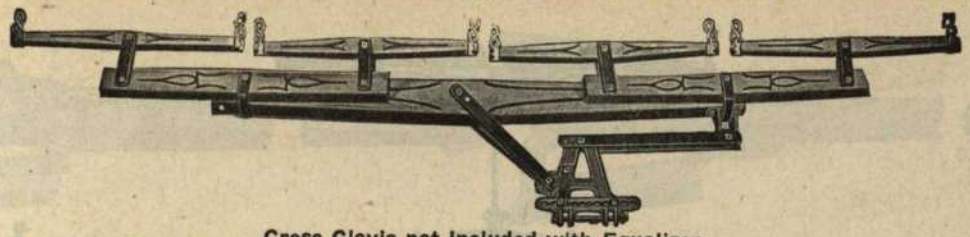
No. 1—Painted, striped and varnished. Weight 44 lbs.....Each, $10.00

No. 2 Heider Four-horse Hitch

This hitch is made very strong and is the best and most practical made, where a hitch is wanted that is coupled very short. By using iron two-horse eveners, leaves center singletrees free to work over top of main evener, thereby giving center horse no chance to get advantage over outside horses. By giving the drop in the two-horse eveners for the outside singletrees gives a straight edge pull and no twist on the main evener. Can be used on any implement where a four-horse hitch is required, such as harrows, disc harrows, grain drills, etc.

No. 2—Painted, striped and varnished. Weight 47 lbs.....Each, $11.00

No. 20 Heider Four-horse Gang, Sulky and Disc Plow Equalizer

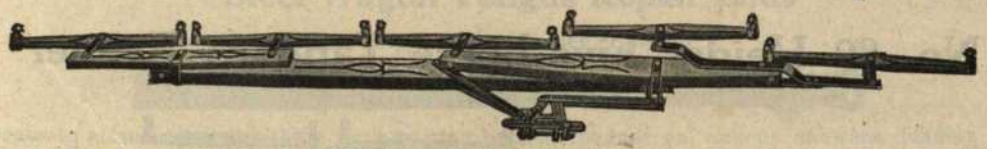


Cross Clevis not included with Equalizer.

This Evener works four horses abreast on either gang, sulky or disc plow, with one horse in the furrow and three on the unplowed ground. It is very strong and durable in every respect, castings of malleable iron, straps of steel, works free from side draft, all four horses pull equal, coupled very short, made very simple, easy to attach. The length of these eveners and singletrees on this four-horse evener gives the horses plenty of room to walk and pull freely. Can be attached to any gang or sulky plow that has a cross clevis, or disc plow that has a broad flat draft bar, and with an Extra Clevis Attachment can easily be attached to frame hitch gang or sulky plows, or plows that have a vertical clevis. Can be used on either right or left hand plows.

No. 20—Painted, striped and varnished. Weight 56 lbs.....Each, $14.00

No. 30 Heider Five-horse Gang Plow Equalizer

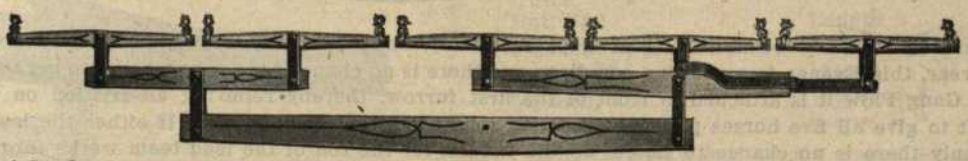


Cross Clevis not included with Equalizer.

Works five horses abreast on 14-inch Gang Plow, with one horse in the furrow and four on the unplowed ground. The evener is made very strong and durable in every respect, castings of malleable iron, straps of steel; all five horses pull equal; coupled very short; made very simple; nothing to get out of order; easy to attach. The manner of construction causes the evener to work very freely. The length of these eveners and singletrees gives the horses plenty of room to walk and pull freely. Can be attached to any 14-inch gang plow that has a cross clevis, and with an Extra Clevis Attachment can easily be attached to frame hitch gang plow or gang plows that have a vertical clevis. Can be used on either right or left hand plows.

No. 30—Painted, striped and varnished. Weight 76 lbs.....Each, $18.00

No. 55 Heider Five-horse Hitch

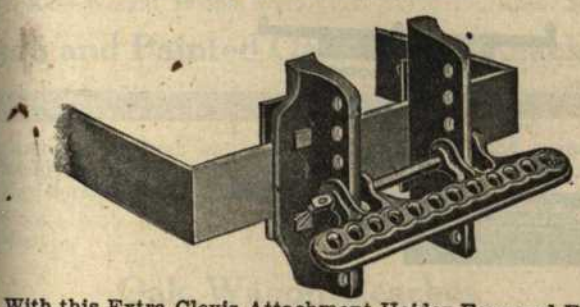


This is a straight five-horse hitch and is especially designed for farm implements without tongues, such as harrows, etc. Can also be used on gang plows by working one horse on the plowed ground. Made very strong and durable and is nicely finished.

No. 55—Painted, striped and varnished. Weight 55 lbs.....Per set, $16.00

Heider Equalizer Clevis Attachments

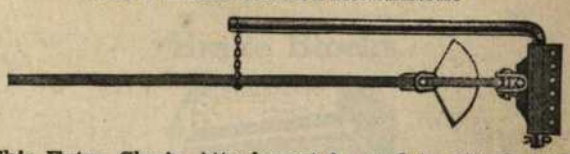
No. 1 Extra Clevis Attachment



With this Extra Clevis Attachment Heider Four and Five-Horse Plow Eveners can be attached to any frame hitch gang or sulky plows with a small frame in front of beam for clevises or plows that have a regular vertical clevis by simply bolting the Extra Clevis Attachment to the frame of the plow with bolts which we furnish with each one. Made very strong, as all castings of this Extra Clevis Attachment are made of malleable iron. If Extra Clevis Attachment is wanted, it must be ordered as an extra.

No. 1.....Each, $3.50

No. 2 Extra Clevis Attachment



This Extra Clevis Attachment is used to attach Heider Four-Horse Gang and Sulky Plow Evener to sulky plows where clevis on plow is shifted by a landing lever or where the wheels of the plow are guided from the clevis. Easily attached by fastening Extra Clevis Attachment to vertical clevis on plow and put chain around beam. Made very strong. Casting made of malleable iron.

If Extra Clevis Attachment is wanted, must be ordered as an extra.

No. 2.....Each, $3.80

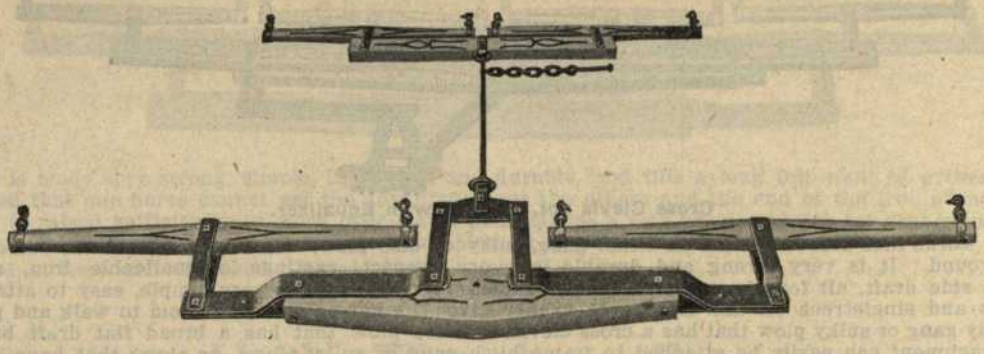
Repairs for Heider Eveners

No. 1—"A" shape casting.....Each, $1.70

No. 3—End casting.....Each, $1.20

No. 6—Cross clevis only for frame hitch attachment.....Each, $1.70

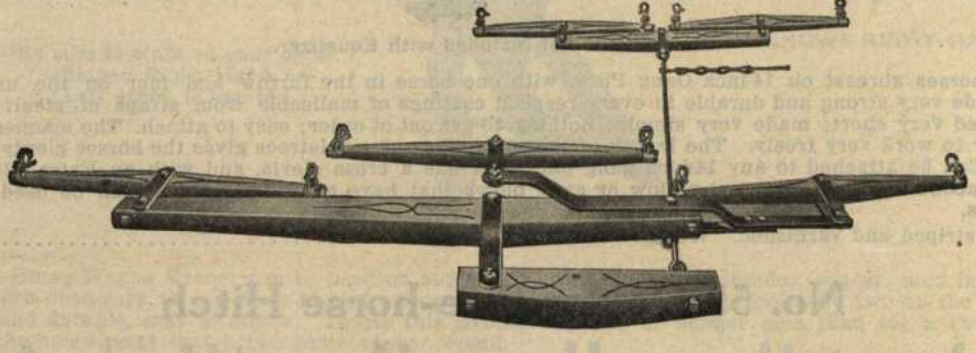
No. 75 Heider Four-horse Tandem Evener



The above cut shows the four-horse Tandem Evener for use on gang or sulky plow or practically any place four horses are required. Made extra strong to stand up under the twist and pull of heavy draft.

No. 75—Painted, striped and varnished. Weight 50 lbs.....Each, $13.00

No. 80 Heider Five-horse Tandem Evener



The above cut shows the five-horse Tandem Evener for any Gang or Sulky Plows. With two horses in the lead and three in the rear, this Evener is a positive equalizer and there is no chance for any one horse to get the advantage over the others. On a Gang Plow it is attached in front of the first furrow, thereby relieving all friction on the land side of the plow. Is built to give all five horses plenty of room to spread out and walk freely. If either the lead or rear horses should stop suddenly there is no chance to tangle up the horses, for the rod of the lead team works through a loop under the rear three-horse evener and is arranged with a stop.

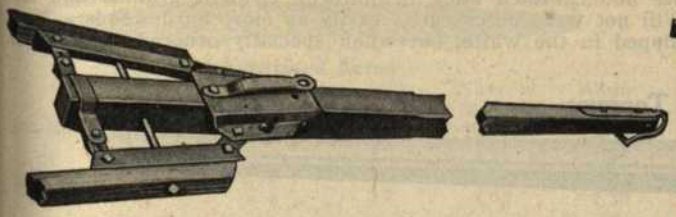
No. 80—Painted, striped and varnished. Weight 59 lbs.....Each, $15.00

No. 90 Heider Six-horse Tandem Evener

The above cut shows the six-horse Tandem Evener for Gang Plow. With two horses in the lead and four horses in the rear, this Evener is a positive equalizer and there is no chance for any one horse to get the advantage of the others. This Evener is attached in the center of a Gang Plow, thereby relieving all friction on the land side of the plow. Is built to give all six horses plenty of room to spread out and walk freely. If either the lead or rear horses should stop suddenly then there is no chance to tangle up the horses, for the rod of the lead team works through a loop under the rear four-horse evener and is arranged with a stop.

No. 90—Painted, striped and varnished. Weight 82 lbs.....Each, $20.00

"Universal" Wood Tongue



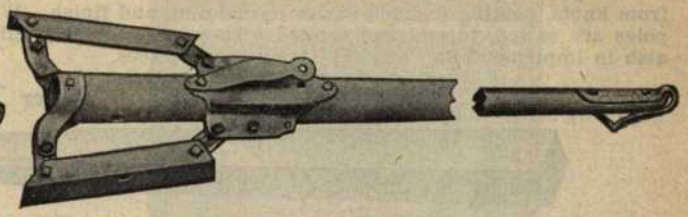
With All Steel Adjustable Hound

Selected mountain white ash thoroughly seasoned. Front adjustment, 10-inch to 16½-inch. Rear adjustment, 17-inch to 22½-inch. Painted Red. Furnished with hammer strap and pole cap.

No. W4837—3¼-inch. Weight 48 lbs.....Each, $14.50

No. W4838—3½-inch. Weight 54 lbs.....Each, $15.00

"Universal" All Steel Tongue



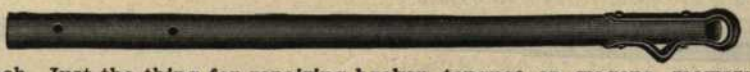
With All Steel Adjustable Hound

12 gauge steel; with open seam, which increases flexibility and prevents buckling under strain. Painted inside and out with rust-proof paint. Diameter base, 4 inches, tapers to 2 inches. Adjustment: Front, 10 inches to 15½ inches; rear, 16½ to 22½ inches. Furnished with hammer strap and pole cap.

No. S1115—Weight 60 lbs.....Each, $15.30

Steel Wagon Tongue Repair Ends

For Repairing Broken Wooden Tongues



Simple and easy to attach. Just the thing for repairing broken tongues on wagons, mowers, binders and other farm machinery. Made in three sizes and furnished complete with pole cap. Painted red.

No. K-125—5 ft.; weight 13½ lbs.....Each, $5.00

No. K-127—7 ft.; weight 19⅛ lbs.....Each, $6.00

No. K-129—9 ft.; weight 25⅔ lbs.....Each, $7.00

Adjustable Steel Hounds

For Wood Wagon Tongues

Front of Hound adjusts from 10 to 16½ inches wide. Rear of Hound adjusts from 17 to 22½ inches wide. Painted red. Hammer strap or wood tongue not included.

No. K-6—Weight 19 lbs.....Each, $6.90

Iron and Painted Oak Wagon Reaches

Made of 2x4-inch oak, dressed down to a good surface. Finished with top and bottom plate, riveted in front and holes bored. Painted red.

9-foot.....Each, $3.50

12-foot.....Each, $4.50

Oak Wagon Reaches

These reaches are surfaced and are ⅛ to ¼ inch smaller than size specified.

2 x4 ins. x 9 ft.....Each, 1.95

2 x4 ins. x 10 ft.....Each, 2.15

2 x4 ins. x 12 ft.....Each, 2.65

2 x4 ins. x 14 ft.....Each, 3.55

2¼x4¼ ins. x 10 ft.....Each, 2.70

2¼x4½ ins. x 12 ft.....Each, 3.40

2¼x4½ ins. x 14 ft.....Each, 4.45

Finished Wagon Tongues

OAK

Size, Butt End	Length	Each
3¼-inch	11½ ft.	3.40
3½-inch	11½ ft.	3.90
3¾-inch	11½ ft.	4.35
4 -inch	11½ ft.	5.10

We will crate four or six wagon tongues when so ordered at an additional charge of 5 cents net per tongue.

FIR

Furnished in one size only, 3½x3½x12 ft, dressed and shaped but not bored. Universal pattern for 3¼-inch skein wagons.

3½-inch.....Each, $5.00

Brake Blocks

For	Width, ins.	Length, ins.	Per Pair
Farm Wagon	3¼	12	.80
Farm Wagon	3½	12	.80
Farm Wagon	4	12	.90
Farm Wagon	4	16	1.30
Farm Wagon	4½	12	1.05

Brake Blocks for Weber Wagons

These blocks are made especially for Weber wagons.

Weber Wagon	4½	10	.90

Agricultural Implement Tongues

These Tongues are made of Fir except where otherwise noted. Each stick is uniform, straight grained and free from knots, making it much easier to make up and finish. Will not warp or crack as easily as most hard woods. These poles are sawed, turned and sanded. They are regularly shipped in the white, but when specially ordered we can furnish in Implement Red at slightly advanced prices.

Mower Tongues

No. 341 can be used on Champion, Standard, Acme, Dain and Adriance Mowers. Also will interchange with M675 and all models of McCormick Mowers up to and including 1915. Is a size which is found suitable for various drills and many other machines using poles of this size; dressed and shaped in the white, not bored, but is easily fitted.

No. 341—3x4x12 ft. 8 ins.....Each, $4.00

No. 351 will interchange with M1251 McCormick and all new McCormick Mowers; D1440, D2672 and all other Deering Mowers; will also interchange with Dain Mowers and is suitable for manure spreaders and various other machines using poles of this size; dressed and shaped in the white, not bored, easily fitted to the proper machines.

No. 351—3x5x12 ft. 8 ins.....Each, $4.30

Binder Tongues

Correct dimensions to be fitted to the various makes of Binders and Spreaders. This size used on binders when they are not equipped with tongue trucks. Dressed and shaped in the white, not bored.

No. 441—4x4x14 ft.....Each, $6.00

Sulky Rake Tongues or Shafts

Correct size for all makes of Sulky Rakes; dressed and shaped in the white, not bored.

No. 121—1¾x2¾x1¾x1¼x10 ft. 3 in.....Each, $1.80

Sweep Rake Tongues

Used as the draw tongue on Sweep Rakes. Made straight and not tapered.

No. 122—2¾x2¾x10 ft.....Each, $3.30

Plow and Cultivator Tongues

Of proper size to be fitted to all Sulky Plows; dressed and shaped in the white, not bored.

No. 210—2¾x ¾x10 ft., Fir.....Each, $2.40
No. 212—2¾x2¾x12 ft., Fir.....Each, $2.60
No. 331—3x3x12 ft., Fir.....Each, $3.00
No. 3312—3x3x12 ft., Oak.....Each, $3.20

Stub Tongues

To Fit Late Style Deering

Surfaced, shaped and bored; will fit Deering Binders.

No. 356 —2¾x5x6 ft. 10 in., No. H3125.....Each, $5.30
No. 356A—3½x6x6 ft. 9 in., New Style.....Each, $5.40

To fit McCormick.

Surfaced, shaped and bored; will fit McCormick Binders.

No. 357 —3½x5x5 ft. 6 in., No. PA162.....Each, $4.10
No. 357A—3½x5x5 ft. 7¾ in., No. PC162.....Each, $4.20

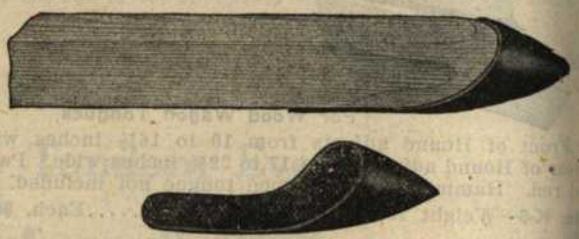
Oak Hind Hawns

2 ins. thick—Finished. Narrow track.....Per pair, 1.60
Approx. Wgt. pr., 11 lbs.

Oak Bent Hawns

	Each
2x3 ins.—Rough. Narrow track. Approx. wgt. 16 lbs.	3.65
2x3 ins.—Rough. Wide track. Approx. wgt. 18 lbs...	3.65

Sweep Rake Teeth



Blank, with no holes drilled. Made of good, clear, straight-grained yellow pine, not painted. Ends of the wood are shaped to fit the points. Furnished either with or without steel points.

8-foot, with steel points.....Each, $1.16
9-foot, with steel points.....Each, $1.28
8-foot, without steel points.....Each, $0.96
9-foot, without steel points.....Each, $1.08
Extra steel points only.....Each, $0.24

Put up 10 in a bundle.

For Steel Hay Rake Teeth, See Index.

Oak Tongue Hawns

2 ins. thick—Finished. Narrow track.....Per pair, 1.15
Approx. Wgt. pr., 7 lbs.

Finished Oak Sand Boards

Furnished Bored

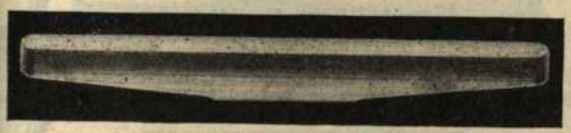
Size, ins.	Width, ins.	Depth, ins.	Approx. Wgt., lbs.	Narrow Track, Each	Wide Track, Each
3	3	3	12	1.20	1.40
3¼	3¼	3¼	13	1.50	1.70
3½	3½	3½	14	2.00	2.20

Finished Hickory Axles

Blocked Out Pattern
Can be used either for front or hind.

Skein, ins.	Width, ins.	Depth, ins.	Approx. Wgt., lbs.	Narrow Track	Wide Track
3	3	4	21	2.90	2.90
3¼	3¼	4¼	24	3.20	3.20
3½	3½	4½	26	3.60	3.60
3¾	3¾	4¾	28	4.20	4.20
4	4	5	30	4.90	..

Finished Oak Front Bolsters



Cut shows plain Bolsters but we furnish Mortised and Bored.

Size, ins.	Width, ins.	Depth, ins.	Approx. Wgt., lbs.	Narrow Track	Wide Track
2¾	2¾	3¾	11	1.37	1.57
3	3	4	13	1.67	1.87
3¼	3¼	4¼	16	1.87	2.17
3½	3½	4½	18	2.17	2.47
3¾	3¾	4¾	20	2.47	....

Finished Oak Hind Bolsters

Cut shows plain Bolsters but we furnish Mortised.

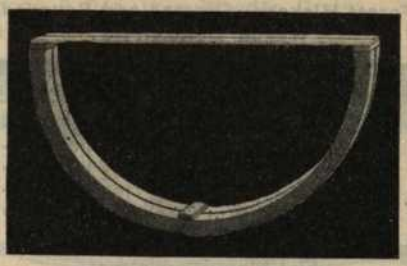
Size, ins.	Width, ins.	Depth, ins.	Approx. Wgt., lbs.	Narrow Track	Wide Track
3	3	4	13	1.62	1.82
3¼	3¼	4¼	16	1.82	2.12
3½	3½	4½	18	2.12	2.42
3¾	3¾	4¾	20	2.42	....

Ironed and Painted Bolsters

Complete, ready to install. Stakes ⅞ inch thick and 14 inches high, ironed and braced on both sides. Has band 1½ inches wide and 18 inches long around the ends to prevent checking. Top plate is ⅛ inch thick and covers entire face of bolster. On the front bolsters the bottom plate is ⅛ inch thick, 3 inches wide and 10 inches long with 1⅛ inch hole. Painted red and varnished with black and yellow striping. Furnished in narrow track only.

Size, ins.	Width, ins.	Depth, ins.	Approx. Wgt., lbs.	For	Each
3¼	3¼	4¼	27	Front	$7.50
3	3	4	25	Hind	$5.50
3¼	3¼	4¼	26	Hind	$6.50

Oak Wagon Rims



8 pieces in a set. 4 pieces in a bundle. No bundles broken.

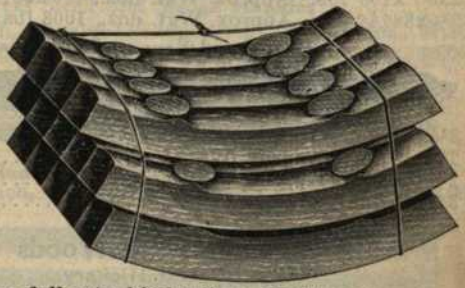
Size, ins.	Height, ins.	Per set
1⅝x2	2-6, 2-8, 2-10, 3-0, 3-2, 3-4, 3-6, 3-8, 3-10, 4-0, 4-2, 4-4, 4-6	9.50
1¾x2¼	2-6, 2-8, 2-10, 3-0, 3-2, 3-4, 3-6, 3-8, 3-10, 4-0, 4-2, 4-4, 4-6	11.25
3x2	2-6, 2-8, 2-10, 3-0, 3-2, 3-4, 3-6, 3-8, 3-10, 4-0, 4-2, 4-4, 4-6	15.30
4x2	2-6, 2-8, 2-10, 3-0, 3-2, 3-4, 3-6, 3-8, 3-10, 4-0, 4-2, 4-6	20.75

Hickory Buggy and Express Rims

8 pieces in a set, 4 pieces in a bundle. No bundles broken.

Size, ins.	Heights, ins.	Per set
1x1⅛	3-0, 3-2, 3-4, 3-6, 3-8, 3-10, 4-0, 4-2	5.10
1⅛x1¼	3-0, 3-2, 3-4, 3-6, 3-8, 3-10, 4-0, 4-2	5.75
1¼x1⅜	3-0, 3-2, 3-4, 3-6, 3-8, 3-10, 4-0, 4-2	6.90

Finished Oak Sawed Felloes



Front felloes packed 12 pieces, hind 14 pieces to a bundle.

A complete set consists of 26 pieces (two bundles).

Orders for less than full sets, front felloes one-half price full sets, hind felloes add 10 per cent.

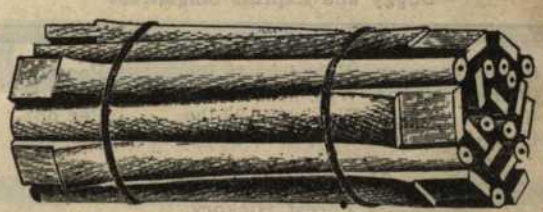
No bundles broken. In ordering felloes in less than sets state whether **Front or Hind.**

Size, 1⅝x2¼ inches.....Per set, 6.90
Heights, Feet and Inches
Front—3-0, 3-2, 3-8. Hind—3-6, 3-8, 4-4, 4-6.

Size, 1¾x2⅜ inches.....Per set, 7.30
Heights, Feet and Inches
Front—2-6, 2-8, 2-10, 3-0, 3-2, 3-4, 3-6, 3-8.
Hind—3-0, 3-2, 3-4, 3-6, 3-8, 3-10, 4-0, 4-2, 4-4, 4-6.

Size, 2x2½ inches.....Per set, 8.50
Heights, Feet and Inches
Front—3-8 Hind—4-6

Oak Wagon Spokes



Packed in bundles, Fronts 24, Hinds 28. One bundle of each front and hind constitute a set. No bundles broken.

In less than full sets Front Spokes will be charged one-half of full set price. Hind Spokes will be charged 10 per cent more than one-half of full set price.

		Select	Extra Select
2 -inch.	Approx. Wgt. Set, 64 lbs....	Per set, 6.20	7.70
2⅛-inch.	Approx. Wgt. Set, 70 lbs....	Per set, 6.70	8.45
2¼-inch.	Approx. Wgt. Set, 76 lbs....	Per set, 7.20	9.00
2⅜-inch.	Approx. Wgt. Set, 83 lbs....	Per set, 7.70	9.65
2½-inch.	Approx. Wgt. Set, 89 lbs....	Per set, 9.20	11.40

Doubletree Woods

Forest Hickory—Dressed and Rounded.

Wagon Doubletrees

2 x4 x48 ins. Approx. Wgt. doz., 120 lbs..Per doz., 12.20
2 x4½x48 ins. Approx. Wgt. doz., 125 lbs..Per doz., 14.40
2¼x4¼x50 ins. Approx. Wgt. doz., 148 lbs..Per doz., 18.95
2½x4½x52 ins. Approx. Wgt. doz., 180 lbs..Per doz., 24.40
2½x4½x54 ins. Approx. Wgt. doz., 192 lbs..Per doz., 24.40
2½x5 x54 ins. Approx. Wgt. doz., 228 lbs..Per doz., 28.10

Flat Plow Doubletrees

1¾x3½x26 ins. Approx. Wgt. doz., 60 lbs..Per doz., 9.30
1¾x3½x42 ins. Approx. Wgt. doz., 72 lbs..Per doz., 10.30

Three-Horse Doubletrees

2x4½x60 ins. Approx. Wgt. doz., 132 lbs....Per doz., 18.90

Four and Six-Horse Doubletrees

2x5½x 72 ins. Approx. Wgt. doz., 216 lbs...Per doz., 28.65
2x6 x 84 ins. Approx. Wgt. doz., 288 lbs...Per doz., 37.90
2x6 x 90 ins. Approx. Wgt. doz., 312 lbs...Per doz., 45.30
2x6 x 96 ins. Approx. Wgt. doz., 336 lbs...Per doz., 45.30
2x8 x108 ins. Approx. Wgt. doz., 480 lbs...Per doz., 70.10
2½x8x144 ins. Approx. Wgt. doz., 1008 lbs.Per doz., 108.00

Buggy and Express Doubletrees

2¼x48 ins. Approx. Wgt. doz., 48 lbs.....Per doz., 8.00
2½x48 ins. Approx. Wgt. doz., 60 lbs.....Per doz., 8.00
2¾x48 ins. Approx. Wgt. doz., 72 lbs.....Per doz., 9.90
3 x48 ins. Approx. Wgt. doz., 84 lbs.....Per doz., 11.90

Singletree Woods

Forest Hickory.

Oval Wagon Singletrees

2⅝x36 ins. Approx. Wgt. doz., 36 lbs.....Per doz., 6.60
2¾x36 ins. Approx. Wgt. doz., 48 lbs.....Per doz., 7.50
3 x38 ins. Approx. Wgt. doz., 60 lbs.....Per doz., 11.00

Oval Plow Singletrees

2⅝x30 ins. Approx. Wgt. doz., 24 lbs.....Per doz., 3.75
2½x30 ins. Approx. Wgt. doz., 30 lbs.....Per doz., 4.40

Cultivator Singletrees

1⅝x2¼x28 ins. Approx. Wgt. doz., 22 lbs...Per doz., 3.30

Buggy and Express Singletrees

1¾x40 ins. Approx. Wgt. doz., 18 lbs.....Per doz., 4.60
2 x40 ins. Approx. Wgt. doz., 34 lbs.....Per doz., 4.60
2¼x40 ins. Approx. Wgt. doz., 30 lbs.....Per doz., 5.40
2½x40 ins. Approx. Wgt. doz., 36 lbs.....Per doz., 6.90

Neckyoke Woods

Forest Hickory.

Wagon Neckyokes

2⅝x40 ins. Approx. Wgt. doz., 48 lbs.....Per doz., 9.90
2¾x44 ins. Approx. Wgt. doz., 68 lbs.....Per doz., 12.90
3 x48 ins. Approx. Wgt. doz., 84 lbs.....Per doz., 18.00

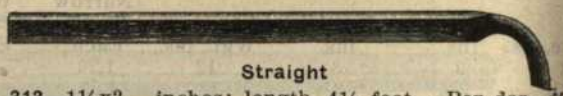
Buggy and Express Neckyokes

1¾x42 ins. Approx. Wgt. doz., 24 lbs.....Per doz., 8.30
2 x42 ins. Approx. Wgt. doz., 30 lbs.....Per doz., 8.30
2¼x42 ins. Approx. Wgt. doz., 38 lbs.....Per doz., 10.90

Plow Handles

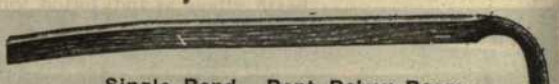
We carry only strictly high grade oak handles.

For right hand plows specify right hand handles which are bent to the left; opposite for left hand plows. 1 dozen in a bundle. Weight approximately 52 lbs. per dozen.



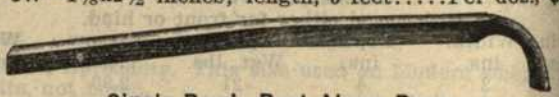
Straight

No. 313—1¼x2 inches; length, 4½ feet...Per doz., $6.30
No. 413—1¼x2 inches; length, 5 feet...Per doz., $6.50
No. 314—1¼x2¼ inches; length, 5 feet...Per doz., $7.00
No. 315—1⅜x2½ inches; length, 5 feet...Per doz., $8.00



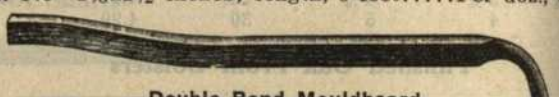
Single Bend. Bent Below Beam.

No. 316—1¼x2¼ inches; length, 5 feet.....Per doz., $7.80
No. 317—1⅜x2½ inches; length, 5 feet.....Per doz., $8.80



Single Bend. Bent Above Beam.

No. 318—1¼x2¼ inches; length, 5 feet.....Per doz., $7.80
No. 319—1⅜x2½ inches; length, 5 feet.....Per doz., $8.80



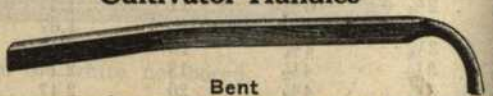
Double Bend Mouldboard.

No. 320—1¼x2¼ inches; length, 5 feet.....Per doz., $8.80
No. 321—1⅜x2½ inches; length, 5 feet.....Per doz., $9.70

K. or Edge Bend.

No. 322—1¼x2¼ inches; length, 5 feet.....Per doz., $9.50

Cultivator Handles



Bent

In ordering, state whether bent to the left or bent to the right. Cut shows Right Hand.

No. 325—1¼x2 inches; length, 4 feet.....Per doz., $6.00

Straight

No. 324—1¼x2 inches; length, 4 feet.....Per doz., $5.50

Double Bend Lister Handles

No. 323—1¼x2¼ inches; length, 5 ft. 6 in...Per doz., $1.60

Plow Beams

Oak—Rough, Not Surfaced.

Size	Width, ins.	Depth, ins.	Length	Each
One-horse	2¾	4	4 ft. 8 ins.	1.90
Two-horse	3	4¾	5 ft. 8 ins.	2.70
Three-horse	3	6	6 ft.	3.20
Breaker	3½	6½	7 ft.	4.90

Plow Rounds

16, 18 or 20-inch length.....Per 100, 8.00
24-inch length. .Per 100, 12.00

Round Top Farm Wagon Bows

½x2 inches. Approx. Wgt. Set, 17 lbs. Per Set of 5 Bows.....2.00

We do not break sets.

Handles

18-Inch and Shorter Packed 1 Doz. in a Paper Carton; Longer, 2 Doz. in a Wooden Crate.

Approximate weight 14-inch hammer handles, 5 lbs. per dozen; 36-inch axe handles, 45 lbs. per crate of 2 dozen. Others proportionate.

Burnt Ivory Brand Handles are strictly highest grade second growth hickory handles, perfectly smooth and white.

Service Brand Handles are high grade second growth hickory with some discoloring, but they are guaranteed for service and a guarantee tag is attached to each piece, reading as follows:

This handle was made to use, NOT TO LOOK AT. It is Straight Grained, Heavy Second Growth Hickory, Streaks or other discoloring do not shorten the life of the handle. Graded according to specifications applying on Government orders where quality is wanted regardless of looks.

Trojan Brand Handles are a good selection of mixed second and third grade Hickory Handles.

On open orders Service Brand will be shipped.

Hammer Handle Assortment

This assortment contains 12 Service Brand Handles as follows:

2—16-inch Blacksmiths'.	2—18-inch Machinists'.
2—18-inch Blacksmiths'.	2—14-inch Adz Eye.
2—16-inch Machinists'.	2—16-inch Farriers'.

No. F50 Assortment—In carton.....Each, $3.10

Adz Eye Hammer Handles

No. 14AE —14-inch Service Brand. . .....Per doz., $2.60
No. 14AEX—14-inch Trojan Brand. . . ..Per doz., $1.60

Riveting Hammer Handles

No. 14R—14-inch Service Brand.....Per doz., $2.90
No. 16R—16-inch Service Brand.....Per doz., $3.10

Blacksmiths' Hammer Handles

No. 16B —16-inch Service Brand. . .....Per doz., $3.10
No. 18B —18-inch Service Brand. . .....Per doz., $3.40
No. 16BX—16-inch Trojan Brand.....Per doz., $2.00

Machinists' Hammer Handles

No. 12M —12-inch Service Brand. .....Per doz., $2.90
No. 14M —14-inch Service Brand. .....Per doz., $2.90
No. 16M —16-inch Service Brand. .....Per doz., $3.10
No. 18M —18-inch Service Brand. .....Per doz., $3.40
No. 16MX—16-inch Trojan Brand.....Per doz., $2.00

Farriers' Hammer Handles

No. 14F—14-inch Service Brand.....Per doz., $2.90
No. 16F—16-inch Service Brand.....Per doz., $3.10

Shingling Hatchet Handles

No. 14SH —14-inch Service Brand. . .....Per doz., $2.60
No. 14SHX—14-inch Trojan Brand. . .....Per doz., $1.60

Bench Hatchet Handles

No. 18BH—18-inch Service Brand.....Per doz., $3.00

Boy Scout Axe Handle

No. 14BS—14-inch. . .....Per doz., $3.30

Oval Single Bit Axe Handles

No. 28BA—28-inch (Boys'), Service Brand..Per doz., $ 6.50
No. 36PA—36-inch Scroll, Service Brand..Per doz., $10.00

Octagon Hand Shaved Single Bit Axe Handles

No. 36SAK—36-in., Scroll, Burnt Ivory....Per doz., $12.75
No. 36SA —36-in., Scroll, Service Brand..Per doz., $10.00
No. 36HSA—36-in., Plain, Service Brand...Per doz., $10.00
No. 36SAX—36-in., Scroll. Trojan Brand..Per doz., $ 5.00

Octagon Hand Shaved Double Bit Axe Handles

No. 36DBAK—36-inch, Burnt Ivory Brand.Per doz., $12.80
No. 36DBA —36-inch, Service Brand. . ...Per doz., $10.00
No. 36DBAX—36-inch, Trojan Brand.....Per doz., $ 4.00

Oval Swell End Sledge Handles

No. 30S—30-inch, Service Brand.....Per doz., $7.30
No. 36S—36-inch, Service Brand.....Per doz., $8.00

Octagon Hand Shaved Swell End Sledge Handles

No. 36HS—36-inch, Service Brand.....Per doz., $8.00

Post Maul Handles

No. 36PM—36-inch, Service Brand.....Per doz., $7.10

Railroad, Clay or Tamping Pick Handles

No. 36RP—36-inch, Service Brand.....Per doz., $10.00

Mattock Handles

No. 36M—36-inch, Service Brand.....Per doz., $10.00

Coal Miners' Pick Handles

No. 34CP—34-inch, Service Brand.....Per doz., $9.30

Drifting Pick Handles

No. 34DP—34-inch, Service Brand.....Per doz., $10.00

Oval Turned Grub Hoe

No. 36GH—36-inch, Service Brand.....Per doz., $11.20

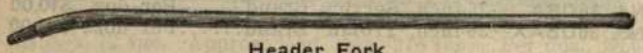
Agricultural Handles

Hay Fork
Chucked and Bored.

No. 134—4½ ft. Straight,, X Grade.....Per doz., 3.60
No. 135—5 ft. Straight, X Grade.....Per doz., 4.20
No. 136—5½ ft. Straight, X Grade.....Per doz., 5.10
No. 137—6 ft. Straight, X Grade.....Per doz., 6.70
No. 234—4½ ft. Straight, XX Grade.....Per doz., 5.30
No. 235—5 ft. Straight, XX Grade.....Per doz., 6.50
No. 236—5½ ft. Straight, XX Grade.....Per doz., 7.90
No. 237—6 ft. Straight, XX Grade.....Per doz., 9.90
No. 140—4 ft. Bent, X Grade.....Per doz., 3.90
No. 141—4½ ft. Bent, X Grade.....Per doz., 4.40
No. 142—5 ft. Bent, X Grade.....Per doz., 5.00
No. 241—4½ ft. Bent, XX Grade.....Per doz., 6.00
No. 242—5 ft. Bent, XX Grade.....Per doz., 7.40
No. 243—5½ ft. Bent, XX Grade.....Per doz., 8.90

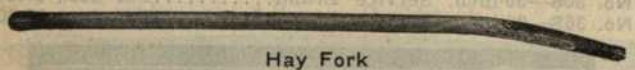
Manure Fork
Chucked and Bored.

No. 144—4 ft. Bent, X Grade.....Per doz., 3.90
No. 145—4½ ft. Bent, X Grade.....Per doz., 4.40
No. 245—4½ ft. Bent, XX Grade.....Per doz., 6.00



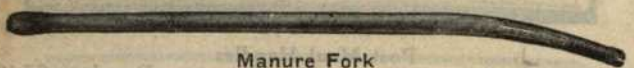
Header Fork
Chucked and Bored.

No. 246—4 ft. Bent, XX Grade.....Per doz., 5.60
No. 247—4½ ft. Bent, XX Grade.....Per doz., 6.00
No. 248—5 ft. Bent, XX Grade.....Per doz., 7.40



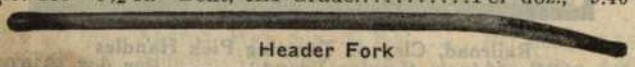
Hay Fork
With strap ferrules and caps. Bored, ready to drive on.

No. 151—4 ft. Bent, X Grade.....Per doz., 7.20
No. 152—4½ ft. Bent, X Grade.....Per doz., 7.70
No. 153—5 ft. Bent, X Grade.....Per doz., 8.40
No. 252—4½ ft. Bent, XX Grade.....Per doz., 9.40
No. 253—5 ft. Bent, XX Grade.....Per doz., 10.70
No. 254—5½ ft. Bent, XX Grade.....Per doz., 12.20



Manure Fork
With strap ferrules and caps. Bored, ready to drive on.

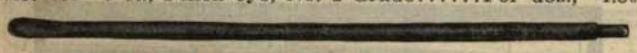
No. 155—4 ft. Bent, X Grade.....Per doz., 7.20
No. 156—4½ ft. Bent, X Grade.....Per doz., 7.70
No. 256—4½ ft. Bent, XX Grade.....Per doz., 9.40



Header Fork
With strap ferrules and caps. Bored, ready to drive on.

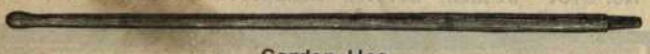
No. 257—4 ft. Bent, XX Grade.....Per doz., 8.90
No. 258—4½ ft. Bent, XX Grade.....Per doz., 9.40
No. 259—5 ft. Bent, XX Grade.....Per doz., 10.70

Planters' Eye Hoe
No. 162—5 ft., 2-inch eye, No. 1 Grade.....Per doz., 4.80



Cotton Hoe
Chucked and bored.

No. 164—5 ft. X Grade.....Per doz., 4.20



Garden Hoe
Chucked and bored.

No. 160—4⅓ ft. X Grade.....Per doz., 3.40
No. 260—4⅓ ft. XX Grade.....Per doz., 4.60

Garden Rake
Chucked and bored.

No. 165—5½ ft. X Grade.....Per doz., 4.70
No. 166—6 ft. X Grade.....Per doz., 6.20

Long Shovel, Ames Pattern

No. 170—4½ ft. X Grade.....Per doz., 5.70
No. 270—4½ ft. XX Grade.....Per doz., 8.00

Long Shovel, Chisholm Pattern

No. 271—4½ ft. XX Grade.....Per doz., 8.00

Long Bent Spade

No. 168—4½ ft. X Grade.....Per doz., 5.40

Long Maple Irrigating

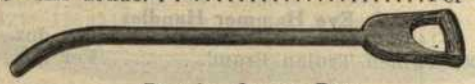
No. 173—4-ft. Chucked, X Grade.....Per doz., 5.40

Regular Spade, Bent

No. 178— X Grade.....Per doz., 7.10
No. 278—XX Grade.....Per doz., 8.60

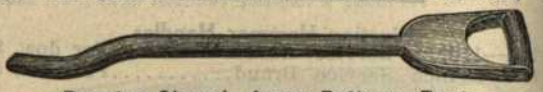
Regular Drain Spade, Bent

No. 279—XX Grade.....Per doz., 8.60



Regular Scoop, Ben

No. 184— X Grade.....Per doz., 7.40
No. 284—XX Grade.....Per doz., 8.90

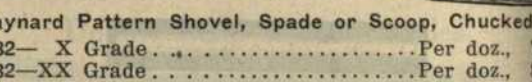


Regular Shovel, Ames Pattern, Bent

No. 180— X Grade.....Per doz., 7.40
No. 280—XX Grade.....Per doz., 8.90

Maynard Pattern Shovel, Spade or Scoop, Chucked

No. 182— X Grade.....Per doz., 7.10
No. 282—XX Grade.....Per doz., 8.60



Chisholm Pattern Shovel, Spade or Scoop, Bent

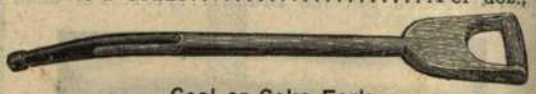
No. 186— X Grade.....Per doz., 7.10
No. 286—XX Grade.....Per doz., 8.60

Manure Fork
With strap ferrules and caps. Malleable iron D with wood grip

No. 274—XX Grade.....Per doz., 11.50

Spading Fork
With strap ferrules and caps. Malleable iron D with wood grip.

No. 176—No. 1 Grade.....Per doz., 10.10



Coal or Coke Fork
With heavy strap ferrules and caps. Wood grip.

No. 277—XX Grade.....Per doz., 13.40

All Handles 1 dozen in a bundle.

D Handles

No. 17 and 18 Pattern

No. 19 Adjustable Pattern

Nos. 17 and 18 have 1⅛-inch opening for handle. No. 19 is adjustable and will fit any size handle.

No. 17—Malleable Handle with Wood Grip.....Doz., $3.60
No. 18—All Malleable Handle. .....Doz., $4.50
No. 19—Steel, Wood Grip Adjustable Handle....Doz., $4.00

Fork Ferrules and Caps

Pattern	For	Ferrules Per doz.	Caps Per doz.
Plain	Hay Forks	$1.95	$1.08
Strapped	Hay Forks	$4.45	$1.08
Plain	Manure Forks	$1.95	$1.08
Strapped	Manure Forks	$4.45	$1.08

Farm Tool Brackets

Made of malleable iron and reinforced where the bracket joins the base. Black enamel finish.

No. 1—Fork Bracket, weight 3 lbs.....Each, $1.50
No. 2—Rake Bracket, weight 3 lbs.....Each, $1.80
No. 3—Hoe Bracket, weight 2½ lbs.....Each, $1.30

For other brackets, refer to page 658.

Railroad Picks

These Picks have a 1-in. chisel edge on one end and a sharp point on the other. Accurately tempered and will give splendid service. Black finish, bevel polished. Packed 2 dozen in a case.

No. 16—Weight 6 lbs., length 23½ ins....Per doz., $17.00
No. 17—Weight 7 lbs., length 24½ ins....Per doz., $18.00

Mattocks

Cutter pattern with a 3-in. hoe on one side and 2½x4¾ in. cutter on the other. Made of a good grade of steel and will give splendid service. Black finish, bevel polished. Packed 2 dozen in a case.

No. 26—Weight 6 lbs.....Per doz., $20.00

Grub Hoes

Baltimore pattern with blade 3¾ ins. wide and 7¾ ins. long. Holds an edge well because of the careful tempering, and can be resharpened without injuring the temper. Black finish, bevel polished. Packed 2 dozen in a case.

No. 335—Weight 3½ lbs.....Per doz., $15.00

Clover Leaf Scythes

Made of one piece of tempered steel. Cutting edge polished, balance of scythe black enameloid. Furnished in Grass, Weed and Bush shapes. Packed ½ dozen in a bundle, assorted lengths, Grass 28 to 32 inches, Weed 24 to 28 inches, and Bush 18 to 22 inches.

Clover Leaf Grass Scythes, weight per doz., 26 lbs.....Per doz., $27.80
Clover Leaf Weed Scythes, weight per doz., 28 lbs.....Per doz., $29.20
Clover Leaf Bush Scythes, weight per doz., 28 lbs.....Per doz., $29.20

Snaths

No. 50 is intended for Grass Scythes and No. 105 for Bush Scythes. Either pattern can be used with the Weed Scythes. ½ dozen in a bundle.

No. 50—Grass Snaths. Weight per doz., 48 lbs.....Per doz., $25.50
No. 105—Bush Snaths. Weight per doz., 55 lbs.....Per doz., $30.00

No. 50 Swing Socket.

No. 105 Patent Loop Bush.

Snath Repairs

No. A—End Web for No. 50 Swing Socket Grass Snath.....Per doz., 1.25
No. I—End Web for No. 105 Patent Loop Bush Snath. .....Per doz., 2.00
No. B—Lock Bolt for No. 50 Swing Socket Grass Snath.....Per doz., .75
No. K—Loop Bolt and Nut for all Loop Grass Snaths. .....Per doz., 1.50
No. L—Loop Bolt and Nut for No. 105 Loop Bush Snath.....Per doz., 1.75
No. X—Nib Iron, Nut, Wood and Collar, complete. .....Per doz., 3.00

No. A No. I No. B No. K No. L No. X

Shovels, Spades and Scoops

Grain Scoops

Western Pattern. Hollow Back.

These scoops are made of 17-gauge steel, and this is the pattern used almost universally for handling grain. Furnished in black, satin or polished finish. D handle.

	Size	Dimensions Width	Length	Wgt. lbs. Per	Black Per	Satin Per	Polished Per
No.	No.	Ins.	Ins.	Doz.	Doz.	Doz.	Doz.
1540	4	12¾	15¾	70	$28.10	$29.40	$30.90
1550	5	13¼	16¼	72	$28.90	$30.20	$31.50
1560	6	13½	16½	75	$29.60	$30.90	$32.20
1570	7	14	16¾	77	$30.50	$31.70	$33.00
1580	8	14¼	17½	80	$31.20	$32.50	$33.80
1590	9	14½	18	83	$32.00	$33.30	$34.60
1610	10	15	18¾	86	$32.80	$34.00	$35.40
1612	12	15½	19½	92	$34.30	$35.60	$36.90

Coal Scoops

Eastern Pattern. Hollow Back.

These scoops are sometimes used also as a grain scoop, but are narrower than the Western pattern listed above, and are used more generally for coal. Furnished only in black finish. D handle.

No.	Size No.	Dimensions Width Ins.	Length Ins.	Wgt. Lbs. Per Doz.	Black Per Doz.
1020	2	11	14¾	68	$25.00
1030	3	11½	15¼	72	$25.80
1040	4	11¾	15¾	76	$26.60
1050	5	12¼	16¼	80	$27.40
1060	6	12¼	17	84	$28.10
1070	7	12¾	17½	90	$28.90
1080	8	13	18	92	$29.60

Gravel Scoop

Practically the same as No. 1020 Coal Scoop except the point is rounded back for several inches. Particularly adapted for concrete, sand or gravel. Black finish. 11 inches wide, 14¾ inches long.

No. 920—Weight, per dozen, 63 lbs.....Per doz., $24.50

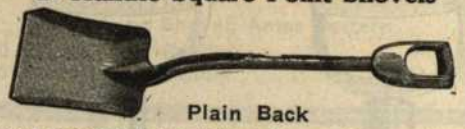
Coal and Coke Shovels

Hollow Back

This is a very popular pattern. Furnished in either black or polished finish. D Handle.

No.	Size No.	Dimensions Width Ins.	Length Ins.	Wgt. Lbs. Per Doz.	Black Per Doz.	Polished Per Doz.
911	1	13¼	13¾	72	$25.80	$28.50
912	2	14	14¾	78	$26.60	$29.20
913	3	14¾	15½	85	$27.40	$30.00

D Handle Square Point Shovels



Plain Back

Numbers preceded by letter C are the grades in most general use, with socket straps, and will give excellent service. Numbers preceded by the letter E are cheaper, with narrow straps, but satisfactory for ordinary light work. Furnished in either black or polished finish.

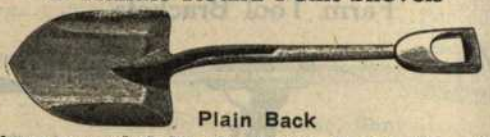
No.	Size No.	Dimensions Width Ins.	Length Ins.	Wgt. Lbs. Per Doz.	Black Per Doz.	Polished Per Doz.
C22	2	9¾	12	63	$27.70	$30.30
E22	2	9¾	12	56	$23.80	$26.50

Hollow Back

These shovels are similar to No. E22, except made in the hollow back pattern and are furnished only in satin finish. Blade is 9¾ ins. wide and 12 ins. long.

No. 4H22—Satin finish. Wgt. doz., 42 lbs...Per doz., $23.80

D Handle Round Point Shovels



Plain Back

Numbers preceded by the letter C are the grades in most general use, with socket straps, and will give excellent service. Numbers preceded by the letter E are cheaper, with narrow straps, but satisfactory for ordinary light work. Furnished in either black or polished finish.

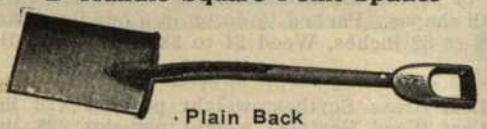
No.	Size No.	Dimensions Width Ins.	Length Ins.	Wgt. Lbs. Per Doz.	Black Per Doz.	Polished Per Doz.
C32	2	9¼	13	61	$27.70	$30.30
E32	2	9¼	13	54	$23.80	$26.50

Hollow Back

These shovels are similar to No. E32, except made in hollow back pattern and are furnished only in satin finish. Blade is 9¼ ins. wide and 13 ins. long.

No. 4H32—Satin Finish. Wgt. doz., 42 lbs..Per doz., $23.80

D Handle Square Point Spades



Plain Back

Numbers preceded by the letter C are the grades in most general use, with socket straps, and will give excellent service. Numbers preceded by the letter E are cheaper, with narrow straps, but satisfactory for ordinary light work. Furnished in either black or polished finish.

No.	Size No.	Dimensions Width Ins.	Length Ins.	Wgt. Lbs. Per Doz.	Black Per Doz.	Polished Per Doz.
C62	2	7¼	11¾	56	$27.70	$30.30
E62	2	7¼	11¾	54	$23.80	$26.50

Hollow Back

These spades are similar to No. E62, except made in hollow back pattern and are furnished only in satin finish. Blade is 7¼ ins. wide and 11¾ ins. long.

No. 4H62—Satin Finish. Wgt. doz., 42 lbs..Per doz., $23.80

Drain Spades

Plain Back. Socket Strap

Blades are 5½ ins. wide at top and 4⅝ ins. wide at point. Furnished in either black or polished finish. D handle.

No.	Length Blade	Weight Lbs. Per Doz.	Black. Per Doz.	Polished. Per Doz.
D701	14 ins.	54	$28.30	$30.90
D702	16 ins.	57	$29.10	$31.70
D703	18 ins.	60	$29.80	$32.50

All Shovels, Spades and Scoops ½ dozen in a bundle.

Shovels, Spades and Scoops—Continued

Ditching Spades

Plain Back. Socket Strap.

Blades are 5¾ ins. wide at top and 6½ ins. wide at point. Furnished in either black or polished finish. D handle.

No.	Length Blade	Wgt. Lbs. Per Doz.	Black Per Doz.	Polished Per Doz.
D711	14 ins	58	$28.30	$30.90
D712	16 ins	61	$29.10	$31.70
D713	18 ins	65	$29.80	$32.50

Long Handle Square Point Shovels

Plain Back

Numbers preceded by the letter C are the grade in most general use, with socket straps, and will give excellent service. Numbers preceded by the letter E are cheaper, with narrow straps, but satisfactory for ordinary light work. Furnished in either black or polished finish.

No.	Size No.	Dimensions Width Ins.	Dimensions Length Ins.	Wgt. Lbs. Per Doz.	Black Per Doz.	Polished Per Doz.
C42	2	9¾	12	70	$27.70	$30.30
E42	2	9¾	12	62	$23.80	$26.50

Hollow Back.

These shovels are similar to No. E42 except made in hollow back pattern and are furnished only in satin finish. Blade is 9¾ inches wide and 11¾ inches long.

No. 4H42—Satin Finish. Wgt. doz., 58 lbs..Per doz., $23.80

Long Handle Round Point Shovels

Plain Back.

Numbers preceded by the letter C are the grade in most general use, with socket straps, and will give excellent service. Numbers preceded by the letter E are cheaper, with narrow straps, but satisfactory for ordinary light work. Furnished in either black or polished finish.

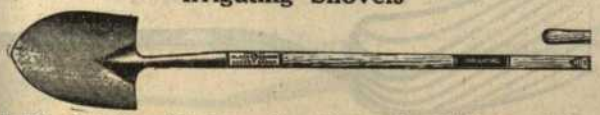
No.	Size No.	Dimensions Width Ins.	Dimensions Length Ins.	Wgt. Lbs. Per Doz.	Black Per Doz.	Polished Per Doz.
C52	2	9¾	11¾	64	$27.70	$30.30
E52	2	9¾	11¾	60	$23.80	$26.50

Hollow Back.

These shovels are similar to No. E52 except made in hollow back pattern and are furnished only in satin finish. Blade is 9¾ inches wide and 11¾ inches long.

No. 4H52—Satin Finish. Wgt. doz., 60 lbs..Per doz., $23.80

Irrigating Shovels



Solid shank with long handles. No. G81 has No. 1 blade 8½x11 inches. No. G82 has No. 2 blade 9¾x11¾ inches. Polished finish.

No. G81—Weight, per dozen, 60 lbs.....Per doz., $34.00
No. G82—Weight, per dozen, 66 lbs.....Per doz., $34.00

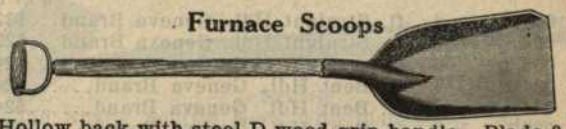
All above Shovels, Spades and Scoops ½ dozen in a bundle.

Snow Shovels

Hollow back with long handle. Blade 11½ ins. wide and 15 ins. long. Two rivets through shank and handle. Packed six in a bundle.

No. 2200—Weight per doz., 57 lbs.....Per doz., $9.70

Furnace Scoops



Hollow back with steel D wood grip handle. Blade 9 ins. wide and 14 ins. long. Packed six in a bundle.

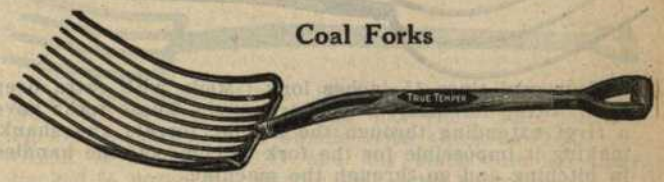
No. 60—Weight per doz., 54 lbs.....Per doz., $14.40

Economy Shovel Ash Sifter

Operates in the ash pit and avoids spreading dust and fine ashes. The runners on the bottom are a very important feature, as they allow the sifter to rest on the bottom while sifting. The blade is 8½ ins. wide, 2½ ins. deep and 18 ins. long. Holes in bottom permit fine ashes to go through but save the unburned coal. Built strong but is light and easy to use. Packed three in a bundle.

No. 2471—Weight per doz., 52 lbs.....Per doz., $24.00

Coal Forks



Tines are diamond shape. On No. 812½ the tines are 16 inches long, and approximately ⅞ inch apart. On No. 814 the tines are 15 inches long and approximately ⅞ inch apart. 30-inch iron D handles and strap ferrules. Packed ½ dozen in a bundle.

No. 812½—12 Tines. Wgt. per doz., 80 lbs..Per doz., $62.00
No. 814 —14 Tines. Wgt. per doz., 90 lbs..Per doz., $71.00

Cotton Seed Scoop Forks

Tines are diamond shape, 17 inches long, and approximately 1¼ inches apart. 30-inch iron D handles and strap ferrules. Blue finish tines. Packed ½ dozen in a bundle.

No. 410S—10 Tines. Wgt. per doz., 90 lbs..Per doz., $57.20
No. 412S—12 Tines. Wgt. per doz., 104 lbs..Per doz., $65.40

Beet Forks

Seven round tines 16 inches long with ball points, and approximately 2⅝ inches apart. Strap ferrules and 32 inch iron D handles. Tumbled finish tines. Packed ½ dozen in a bundle.

No. 037S—7 Tines. Wgt. per doz., 72 lbs..Per doz., $43.00

Forks

"Geneva" brand forks are strictly high grade in every respect, and are fully guaranteed against defects in material or workmanship. In specifying "Geneva" brand you are assured of getting the best to be obtained.

"Oxford" brand forks are good serviceable tools, and will give good satisfaction, but do not carry the same guarantee as "Geneva" brand. "Eureka" brand forks are intended for light work and are not guaranteed.

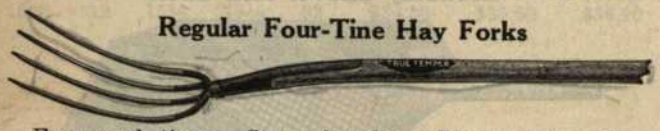
Regular Three-Tine Hay Forks

Three oval tines. Strap ferrules. Bronze trimmed.

		Per doz.
No. 034	—4 -ft. Straight Hdl., Geneva Brand	$32.20
No. 034½	—4½-ft. Straight Hdl., Geneva Brand	$23.50
No. 035	—5 -ft. Straight Hdl., Geneva Brand	$24.50
No. 034B	—4 -ft. Bent Hdl., Geneva Brand	$24.30
No. 034½B	—4½-ft. Bent Hdl., Geneva Brand	$24.70
No. 035B	—5 -ft. Bent Hdl., Geneva Brand	$25.50
No. 034BX	—4 -ft. Bent Hdl., Oxford Brand	$21.00
No. 034½BX	—4½-ft. Bent Hdl., Oxford Brand	$21.00
No. 035BX	—5 -ft. Bent Hdl., Oxford Brand	$21.40

Approx. weight, 4-ft., 31; 4½-ft., 33; 5-ft., 35 lbs., dozen.

Regular Four-Tine Hay Forks



Four oval tines. Strap ferrules. Bronze trimmed.

		Per doz.
No. 044½B	—4½-ft. Bent Hdl., Geneva Brand	$26.50
No. 045B	—5 -ft. Bent Hdl., Geneva Brand	$27.20
No. 044½BX	—4½-ft. Bent Hdl., Oxford Brand	$22.80
No. 045BX	—5 -ft. Bent Hdl., Oxford Brand	$23.50

Approx. weight 4½-ft., 34 lbs.; 5-ft., 36 lbs. per dozen.

Kansas Pattern Header Forks

Riveted Shanks

Four oval tines 15 inches long. Made with extra deep dish. Strap ferrules. Bronze trimmed. These forks have a rivet extending through the handle, ferrule and shank, making it impossible for the fork to come off the handles in pitching and go through the machine.

		Per doz.
No. K0154	—4 -ft. Bent Hdl., Geneva Brand	$37.00
No. K0154½	—4½-ft. Bent Hdl., Geneva Brand	$37.50
No. K0155	—5 -ft. Bent Hdl., Geneva Brand	$38.40
No. K0154X	—4 -ft. Bent Hdl., Oxford Brand	$32.50
No. K0154½X	—4½-ft. Bent Hdl., Oxford Brand	$33.00
No. K0155X	—5 -ft. Bent Hdl., Oxford Brand	$34.00

Approx. weight, 4-ft., 39; 4½-ft., 41; 5-ft., 43 lbs., dozen.

Regular Pattern Header Forks

Four oval tines 15 inches long with regular dish. Strap ferrules. Bronze trimmed.

No. RO154½—4½-ft. Bent Hdl., Geneva Brand. Doz., $34.00
No. RO155 —5 -ft. Bent Hdl., Geneva Brand. Doz., $34.80

Approx. weight 4½-ft., 41 lbs.; 5-ft., 44 lbs. per dozen.

Alfalfa Forks

Four oval tines 13 inches long. Strap ferrules. Bronze trimmed. Especially adapted to handling Alfalfa or Clover.

		Per doz.
No. AO134½	—4½-ft. Bent Hdl., Geneva Brand	$31.20
No. AO135	—5 -ft. Bent Hdl., Geneva Brand	$32.20
No. AO134½X	—4½-ft. Bent Hdl., Oxford Brand	$26.50

Approx weight 4½-ft., 38 lbs.; 5-ft., 42 lbs. per dozen.

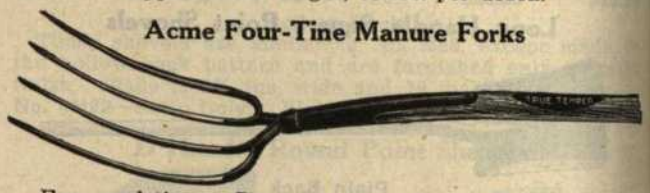
Regular Four-Tine Manure Forks

Four oval tines. Strap ferrules. Furnished in either Geneva brand bronze trimmed or Eureka trimmed in blue.

No. O44½ —4½-ft. Bent Hdl., Geneva Brand. Doz., $29.80
No. O44½Z—4½-ft. Bent Hdl., Eureka Brand. Doz., $23.70
No. O4D —30-in. Iron D Hdl., Geneva Brand. Doz., $30.00

Approximate weight, 38 lbs. per dozen.

Acme Four-Tine Manure Forks



Four oval tines. Strap ferrules. Bronze trimmed

No. AO44½—4½-ft. Bent Hdl., Geneva Brand. Doz., $31.40

Approximate weight, 40 lbs. per dozen.

Regular Five-Tine Manure Forks

Five oval tines. Strap ferrules. Bronze trimmed.

No. 054½ —4½-ft. Bent Hdl., Geneva Brand. Doz., $34.00
No. 054½X—4½-ft. Bent Hdl., Oxford Brand. Doz., $30.40

Approximate weight, 43 lbs. per dozen.

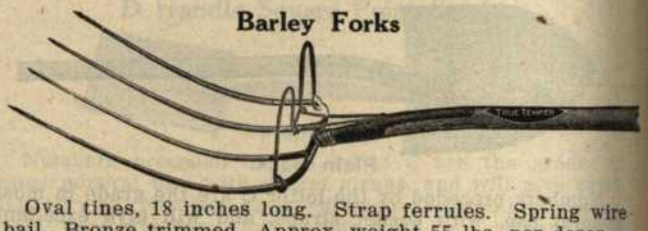
Regular Six-Tine Manure Forks

Six oval tines. Strap ferrules. Bronze trimmed.

No. 064½ —4½-ft. Bent Hdl., Geneva Brand. Doz., $38.80
No. 064½X—4½-ft. Bent Hdl., Oxford Brand. Doz., $35.00

Approximate weight, 48 lbs. per dozen.

Barley Forks



Oval tines, 18 inches long. Strap ferrules. Spring wire bail. Bronze trimmed. Approx. weight 55 lbs. per dozen.

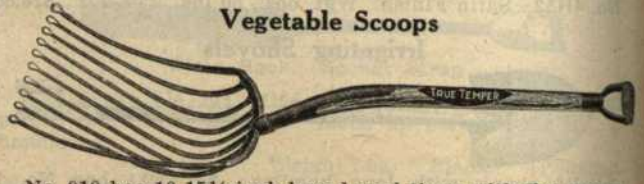
No. BO185—4-tine, 5-ft. Bent Hdl., Geneva Brand. $40.80
No. BO505—5-tine, 5-ft. Bent Hdl., Geneva Brand. $47.50

Ensilage Forks

Ten 16-inch tines with outside tines turned up. Strap ferrules. Iron D handle. Tines half polished. Trimmed in blue. Approx. weight 86 lbs. per dozen.

No. 510—10 Tines, Geneva Brand. Doz., $57.20

Vegetable Scoops



No. 910 has 10 15½-inch broad oval tines with flat points. 14 inches wide. No. 912 has 12 16½-inch broad oval tines with flat points. 18 inches wide. Strap ferrules. Iron D handle. Blue finish. Approx. weight 86 lbs. per dozen.

No. 910—10 Tines, Geneva Brand. Doz., $52.80
No. 912—12 Tines, Geneva Brand. Doz., $62.00

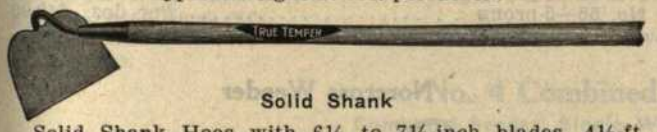
Hoes

Solid Socket

Solid Socket Hoes with 6½ to 7½-inch blades, 4⅓-foot handles. Furnished in either first or second quality. Polished blades. Bronze finish. Packed 1 dozen assorted in a bundle. Blades covered on first quality only.

No. G06½7½ —First quality. . . . . Per doz., $18.70
No. G06½7½X—Second quality. . . . . Per doz., $16.20

Approx. weight 27 lbs. per dozen.



Solid Shank

Solid Shank Hoes with 6½ to 7½-inch blades, 4½-ft. handles. Furnished in either first or second quality. Polished blades. Bronze finish. Packed 1 dozen assorted in a bundle. Blades covered on first quality only.

No. G6½7½ —First quality. . . . . Per doz., $17.00
No. G6½7½X—Second quality. . . . . Per doz., $15.00

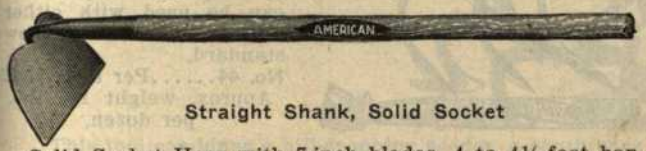
Approx. weight 26 lbs. per dozen.

Nurseryman's

Solid Socket Nurseryman's Hoes with square top and 6½-inch or 7-inch blades, 4½-foot handles. Polished blades. Bronze finish. Packed 1 dozen in a bundle with blades covered.

No. N06½—6½-inch blades. . . . . Per doz., $19.50
No. N07 —7 -inch blades. . . . . Per doz., $19.80

Approx. weight 25 lbs. per dozen.



Straight Shank, Solid Socket

Solid Socket Hoes with 7-inch blades, 4 to 4½-foot handles. Natural finish blades, shanks painted blue. Packed 1 dozen in a bundle, blades not covered.

No. R07. . . . . Per doz., $10.10

Approx. weight 26 lbs. per dozen.

Ladies'

Solid Shank Hoes with 5-inch blades, for ladies' use; 4-foot handles. Polished blades. Bronze finish. Packed 1 dozen in a bundle with blades covered.

No. LY5. . . . . Per doz., $13.20

Approx. weight 20 lbs. per dozen.

Newman's "Easy Kut" Hoe

A Solid Shank hoe that scours well in all kinds of soil. Made of good quality high carbon steel and is tempered so it will hold a sharper and better wearing edge. Easy to work in close places. 1 dozen in a bundle with blades covered.

No. EK750. . . . . Per doz., $21.00

Approx. weight 22 lbs. per dozen.

Sod Lifters

Solid steel, 18-inch Solid Shank, Plain Ferrule, Malleable D Handles. ½ dozen in a bundle with blades covered.

No. 1. . . . . Per doz., $36.00

Approx. weight 30 lbs. per dozen.

Cotton

Solid Socket Cotton Hoes with 8, 9 or 10-inch blades. 5-foot handles. One-third polished blades. Bronze finish. Packed 1 dozen in a bundle with blades covered.

No. SM 08X— 8-inch. . . . . Per doz., $17.00
No. SM 09X— 9-inch. . . . . Per doz., $18.00
No. SM010X—10-inch. . . . . Per doz., $19.50

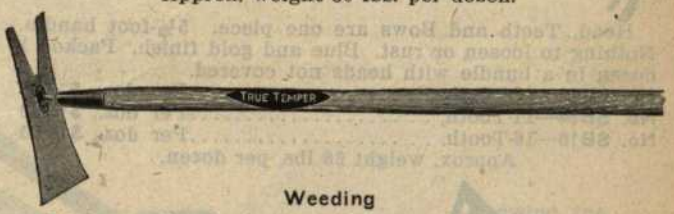
Approx. weight 32 lbs. per dozen.

Scuffle

Solid Shank Scuffle Hoes with blades 7½ inches wide and 3⅜ inches deep. 5-foot handles. Polished blades. Bronze finish. Packed 1 dozen in a bundle, blades not covered.

No. A2. . . . . Per doz., $17.80

Approx. weight 30 lbs. per dozen.



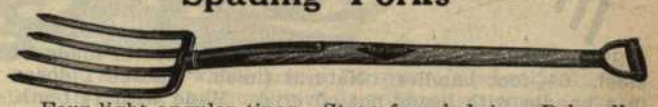
Weeding

Blades made of sheet steel fastened to 4½-foot handle with an iron shank. Furnished with either one or two prongs on top. Blue finish. Blades not covered.

No. 1P—One-prong. . . . . Per doz., $6.00
No. 2P—Two-prong. . . . . Per doz., $6.80

Approx. weight 23 lbs. per dozen.

Spading Forks



Four light angular tines. Strap ferruled, iron D handles. No. OLD is first quality and has tines half polished. Packed ½ dozen in a bundle with tines covered. No. OLDX is second quality and has black tumbled tines. Packed ½ dozen in a bundle with tines not covered.

No. OLD —First quality. . . . . Per doz., $29.10
No. OLDX—Second quality. . . . . Per doz., $25.00

Approx. weight 50 lbs. per dozen.

Four tines with black tumbled finish. Strap ferruled, iron D handles. Packed ½ dozen in a bundle with tines not covered.

No. OLDSP. . . . . Per doz., $18.80

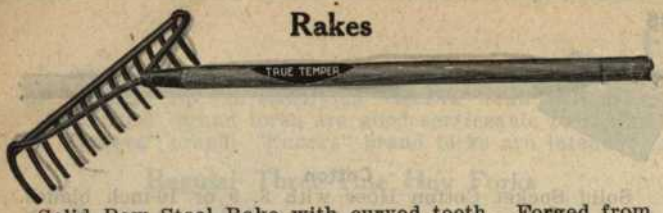
Du-Moore Self-Cleaning Rake

This rake is equipped with a cleaning arm which serves to remove from the teeth any leaves, trash or other accumulation. When the rake is on the ground the cleaner is held up in the crotch of the rake teeth. Good handles securely fastened in ferrule. By simply inserting a cotter pin the rake is held in a straight position with the cleaner up at the top, for use as a garden rake. Nicely painted and finished. ½ dozen in a bundle.

No. 1509. . . . . Per doz., $24.00

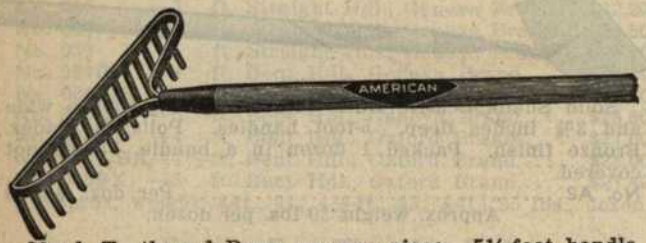
Approx. weight 44 lbs. per dozen.

Rakes



Solid Bow Steel Rake with curved teeth. Forged from one piece of steel. 5½-foot handles. Rake heads riveted to ferrule and handle. Bronze finish. Packed 1 dozen in a bundle with heads not covered.

No. B14—14-Tooth. . . . . Per doz., $21.60
No. B16—16-Tooth. . . . . Per doz., $23.20
Approx. weight 37 lbs. per dozen.

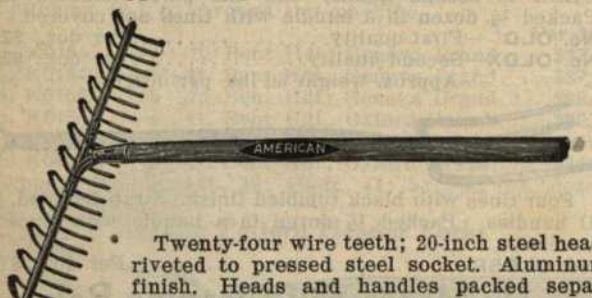


Head, Teeth and Bows are one piece. 5½-foot handle. Nothing to loosen or rust. Blue and gold finish. Packed 1 dozen in a bundle with heads not covered.

No. SB12—12-Tooth. . . . . Per doz., $15.20
No. SB14—14-Tooth. . . . . Per doz., $15.80
No. SB16—16-Tooth. . . . . Per doz., $16.80
Approx. weight 36 lbs. per dozen.

Single Shank Steel Rake with straight teeth, made of steel. 5½-foot handles. Natural finish. Packed 1 dozen in a bundle with heads not covered. Made with 14 teeth. Designed to replace the old style malleable rakes.

No. 14SM—14-Tooth. . . . . Per doz., $9.50
Approx. weight 30 lbs. per dozen.



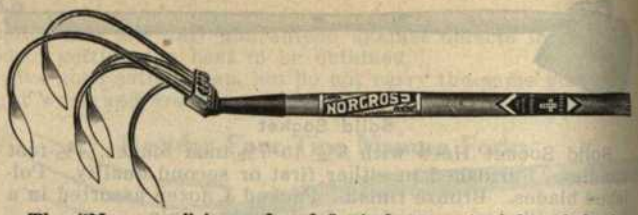
Twenty-four wire teeth; 20-inch steel head, riveted to pressed steel socket. Aluminum finish. Heads and handles packed separately, ½ dozen in a bundle.

No. 124R. . . . . Per doz., $11.00
Approx. weight 37 lbs. per dozen.

Made of 16-gauge, high carbon steel—16 inches wide, unbreakable teeth, 5½-foot polished hardwood handle. Black finish. The wedge-shaped teeth gather in leaves and stems of dandelions, stripping them from lawn. Backward stroke cleans rake instantly. Packed 1 dozen in a bundle.

No. LDR. . . . . Per doz., $13.20
Approx. weight 44 lbs. per dozen.

Norcross Garden Cultivators



The "Norcross" is made of first-class material and finely finished. Handles white ash. Furnished in two sizes, three or five prongs. Packed 6 in a bundle, crated.

No. 33—3-prong. . . . . Per doz., $13.50
No. 55—5-prong. . . . . Per doz., $18.00
Approx. weight 30 lbs. per dozen.

Norcross Weeder

This Weeder is practically the same as the other Norcross Cultivators except in size. It has a 9-inch handle. Packed 1 dozen in a bundle. Weight each, 12 ozs.

No. 11. . . . . Per doz., $7.20
Approx. weight 9 lbs. per dozen.

Norcross Universal Connection

Connection Only

This casting was designed so that the Norcross Cultivator can be used in connection with a wheel plow. Shaped so it can be used with either upright or horizontal plow standard.

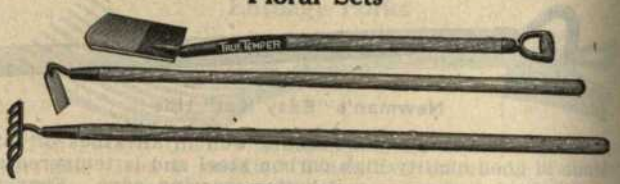
No. 44. . . . . Per doz., $3.20
Approx. weight 1½ lbs. per dozen.

Garden Trowels

Blade 6 inches long and 3 inches wide at the heel. Length over all 11½ inches. Blue lacquer finish. Hardwood handle. Packed 1 dozen in a carton.

No. O. . . . . Per dozen, $1.90
Approx. weight 5 lbs. per dozen.

Floral Sets



Three-Piece

Consists of Shovel, 3-foot handle; Hoe, 4-inch blade, 3-foot handle; 6-tooth Rake, 3½-foot handle; all forged steel. For work in small garden or for children.

No. 3FSX. . . . . Per doz. sets, 24.50
Approx. weight 35 lbs. per dozen sets.

Four-Piece

Consists of round point Floral Shovel with iron D handle; Hoe, 4-inch blade, 4-foot handle; 6-tooth Rake, 4-foot handle; Spading Fork, 4-tine, 3½-foot handle. All forged steel and a good substantial set. For school or municipal garden work.

No. 4PSF. . . . . Per doz. sets, 49.50
Approx. weight 50 lbs. per dozen sets.

Planet Jr. Farm and Garden Tools

Hand seeders and wheel hoes are greatly appreciated and universally recommended today. Never has the necessity for such tools been so evident to reduce the cost of growing crops and get the greatest amount possible out of the land.

Planting must be regular, accurate, at the proper depth and in a narrow line, to make after-cultivation easy and to produce a large, even crop.

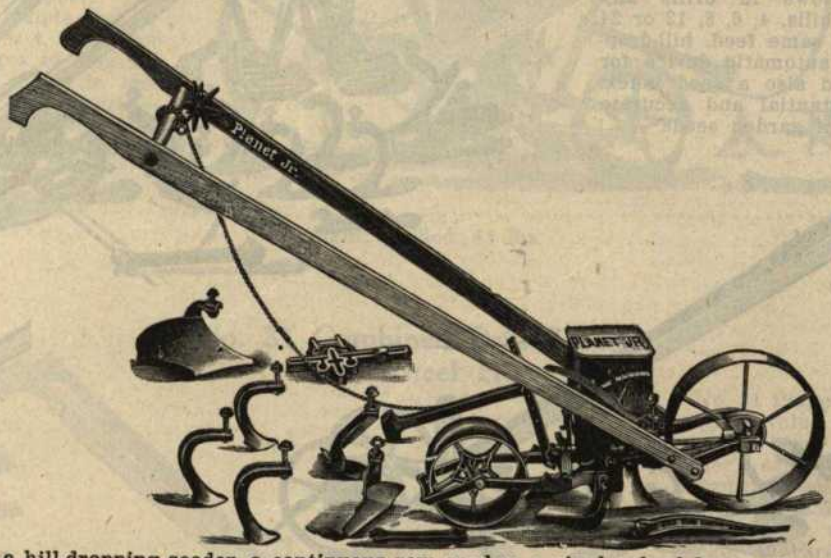
These points are all important, because hoeing and cultivating are repeated frequently during the season and are simplified by a uniform stand and straight rows. For many crops a better stand and a saving in seed is obtained by planting in hills.

The small grower should select one of our combined machines such as a No. 4 or 25. The drill attachment will not be used as often as the hoeing and cultivating tools, but it does not add greatly to the cost, and will be a source of much satisfaction. The smaller machines are also suitable for use in the farmer's garden, but market gardeners should choose the larger tools, such as No. 3, or Multiple Seeders, to be followed in the cultivating season by Planet Jr. Double and Single Wheel Hoes, etc.

The manufacturers will gladly furnish electros and advertising copy to dealers who wish to advertise in their local newspapers.

No. 4 Combined Hill and Drill Seeder

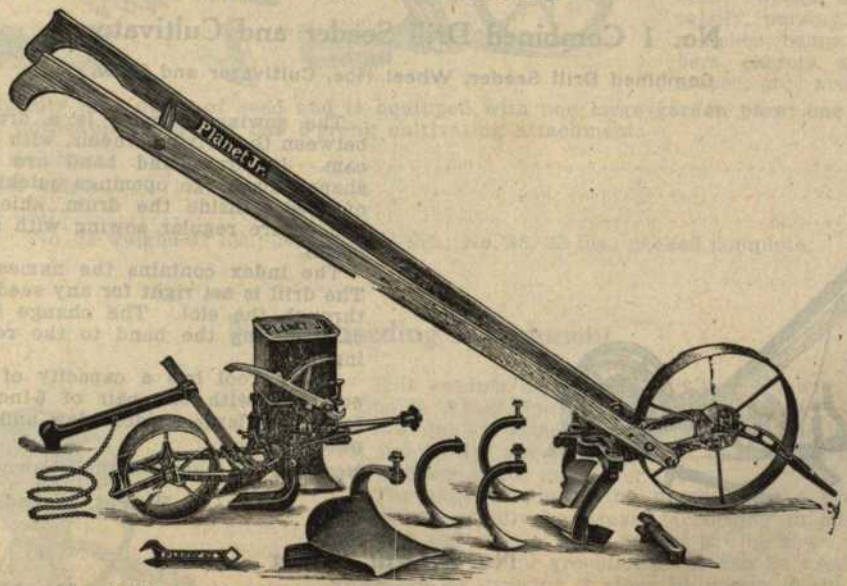
Combined Seeder, Single Wheel Hoe, Cultivator and Plow.



Showing the No. 4 Combined Tool with Seeder attached.

This tool combines a hill-dropping seeder, a continuous row seeder, a single-wheel hoe, a furrower, a wheel cultivator and a wheel garden plow. With a great variety of tools, excellent in design and quality, it is without an equal for easy adjustment, lightness, strength and usefulness. It sows in continuous rows with great uniformity, and drops with accuracy in hills, 4, 6, 8, 12 or 24 inches apart. The feed is automatically stopped by raising the handles, and started by lowering them. As a seeder the No. 4 is accurate, simple, durable, reliable and easy running, doing first-class work in every particular.

For use as a cultivator, the drill parts are removed and the tool frame substituted by changing one bolt. It is then a single-wheel hoe, with a good variety of tools, and a rapid change frame, with side extension for hoeing both sides of a row at one passage. Cut below shows it as equipped for cultivating.



Showing the No. 4 Combined Tool with Seeder detached.

No. 4 Tool has a capacity of 2½ quarts of seed. It has steel driving wheel and is equipped with one pair 6-inch hoes, three cultivator teeth and one garden plow, all oil tempered; also one leaf guard and one marker.

No. 4 —Tool, complete as above.....Each, 21.50

No. 4D—Seeder only, less the cultivating tools.....Each, 17.00

No. 4 weighs 50 lbs., and No. 4D. 40 lbs.. packed complete.

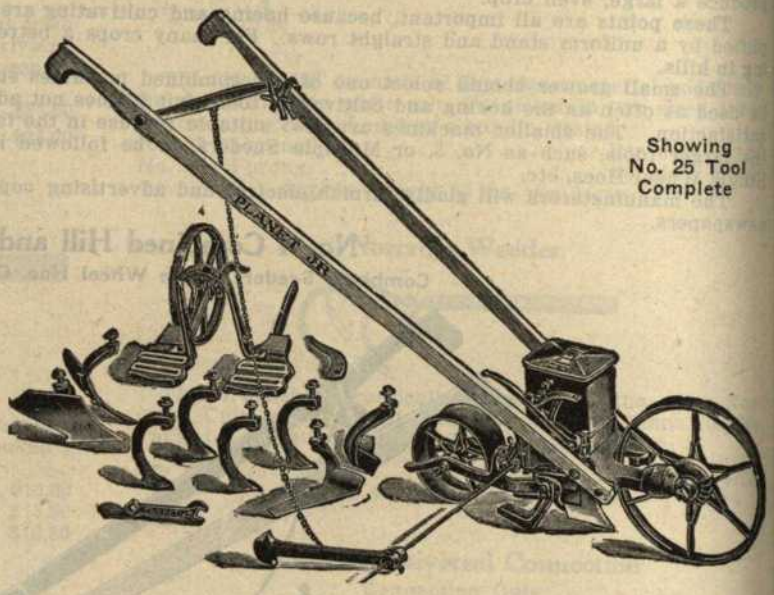
Planet Jr. Farm and Garden Tools—Continued

No. 25 Combined Hill and Drill Seeder

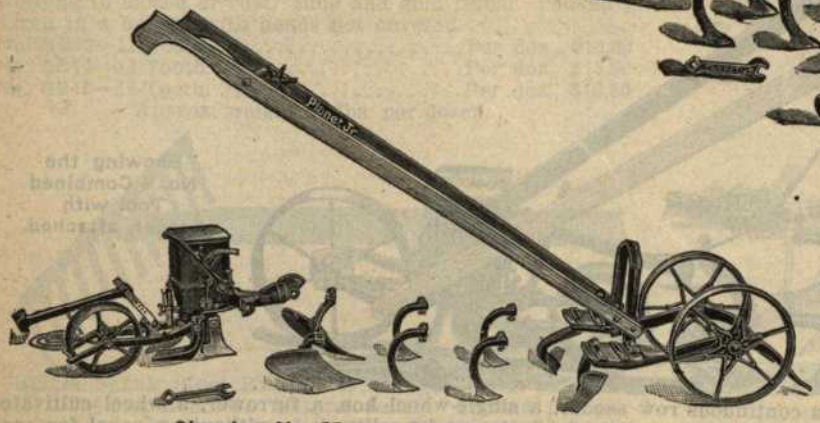
Combined Hill and Drill Seeder, Double and Single Wheel Hoe, Cultivator and Plow.

No. 25 Combined Seeder, Double and Single Wheel Hoe is for gardeners who have enough acreage for a double-wheel hoe to be used, and yet prefer not to buy seeders and wheel hoes separately; also for onion growers and for the large family garden where both a single and double-wheel hoe can be used to advantage. The hopper holds four pounds of onion seed.

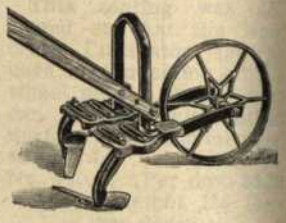
As a seeder it is practically the same as the Planet Jr. No. 4. For description, see previous page. It sows in drills any thickness or drops in hills, 4, 6, 8, 12 or 24 inches apart; has the same feed, hill-dropping mechanism and automatic device for stopping the feed, and also a seed index. It is thoroughly substantial and accurate in planting all kinds of garden seeds.



Showing No. 25 Tool Complete



Showing No. 25 as a Double Wheel Hoe.



Showing No. 25 as a Single Wheel Hoe.

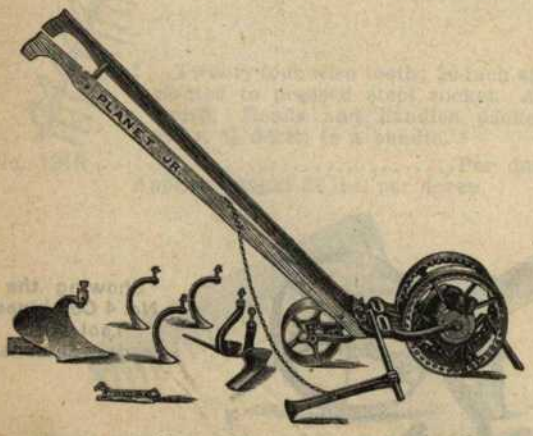
No. 25 Tool has a capacity of 2½ quarts of seed. As a wheel hoe it has steel frame and is equipped with one pair 6-inch hoes, four cultivator teeth and one pair plows, all oil tempered; also two leaf guards and one marker.

No. 25—Tool, complete as above.....Each, 26.00

Weight, packed, 61 lbs.

No. 1 Combined Drill Seeder and Cultivator

Combined Drill Seeder, Wheel Hoe, Cultivator and Plow.



The sowing cylinder is a drum of spring brass set between the driving wheels, with a sliding brass band and cam. In drum and band are corresponding diamond-shaped discharge openings quickly adjusted for any kind of seed. Inside the drum, shields cover the openings, and insure regular sowing with a full hopper or a thimbleful.

The index contains the names of the principal seeds. The drill is set right for any seed when the name appears through the slot. The change is made by opening the cam, sliding the band to the required place, then closing it.

No. 1 Tool has a capacity of 3 pints of seed and is equipped with one pair of 6-inch hoes, three cultivator teeth, one large garden plow and one marker, all oil tempered.

No. 1—Tool, complete as shown.....Each, 17.50

Weight, packed, 47 lbs.

No. 2 Drill Seeder

Built similar to the No. 1 Tool, but does not include the cultivating attachments. Has higher wheels and a larger roller. Capacity 2½ quarts of seed.

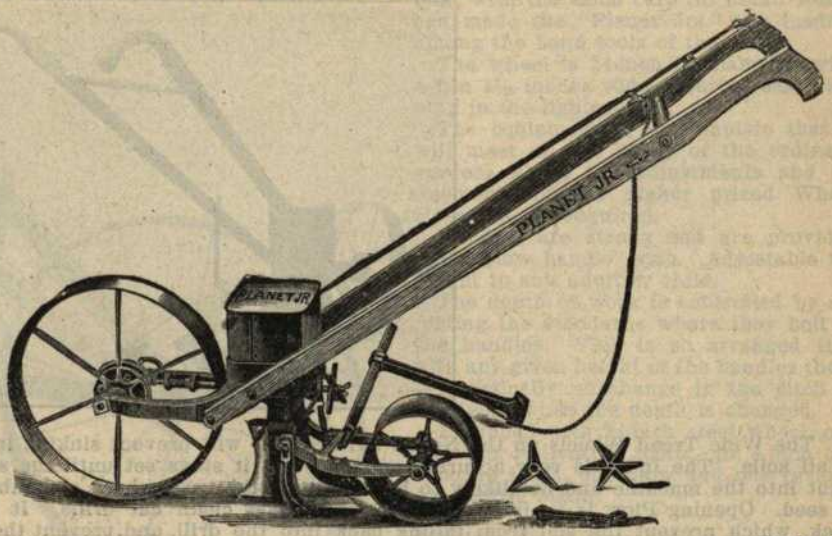
No. 2—Tool, complete as above.....Each, 15.00

Weight, packed, 41 lbs.

Planet Jr. Farm and Garden Tools—Continued

No. 3 Combined Hill and Drill Seeder

The No. 3 Planet Jr. Seeder is a popular size at a popular price. We recommend customers to buy separate seed drills and wheel hoes where they have enough work to warrant it. This is the size that should be bought, except by the very largest market gardeners and sugar beet growers, etc., to whom we recommend the Planet Jr. Multiple Seeders. The steel driving wheel, with heavy steel spokes, not "piano wire," is 15 inches high and has a broad face. The special force feed works equally well whether sowing with an ounce or a full hopper. The hill dropping device is simple and reliable, spacing hills either 4, 6, 8, 12 or 24 inches apart. Changes of distance between hills may be made in less than a minute. From hill to drill—this change is made or reversed almost instantly. Has a capacity of 3 quarts of seed.



No. 3—Tool, complete as above.....Each, 21.00

Weight, packed, 43 lbs.

No. 31 Combined Drill Seeder and Wheel Hoe

No. 31 Planet Jr. is a combined tool of great value to thousands of gardeners who have never felt able to own either a seed drill or a wheel hoe. It is thoroughly well made and offered at a price that makes it pay the smallest gardener. It will sow even a small packet of garden seed the thickness desired with great precision from ¼ to 2 inches deep, in a narrow row. The index is most simple, easily set for every kind of seed. The flow of seed is stopped simply by raising the handles, and the tool may be thrown in or out of gear in a moment. The bottom of the hopper is open to full view. Seeds difficult to sow, like salsify, parsley, beets and lettuce, or radishes, beans, peas, turnips, cucumbers, carrots, spinach, celery, cantaloupes, etc., are handled admirably.

This tool has a capacity of 1 quart of seed and is equipped with one large garden plow, one 5-inch sweep, one 10-inch sweep, one 2-inch cultivator tooth and one 5-prong cultivating attachment.

No. 31—Tool, complete as above.....Each, 14.50
No. 31D—As Drill Seeder only.....Each, 11.50
No. 33—As Wheel Hoe only.....Each, 7.00

No. 31 weighs 32 lbs.; No. 31D, 26 lbs.; No. 33, 22 lbs., packed complete.

No. 35 Seeding Attachment

This seeding attachment can be used with any Planet Jr. Single or Double Wheel Hoe or Garden Plow except No. 33 Single Wheel Hoe.

It is quickly attached by a single bolt and will sow in a continuous row practically any garden seeds, accurately, in straight, even rows, at a uniform depth and cover them.

The index contains the names of the principal seeds and the others can readily be gauged according to size. The hopper holds one pint and even a small packet can be sown without waste.

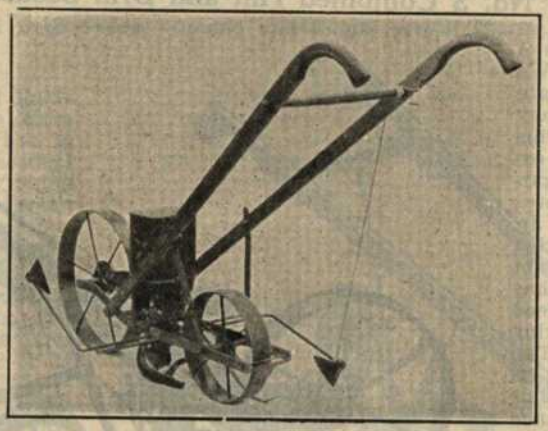
In hotbeds and greenhouses it can be used independently of the wheel hoe by drawing it along by means of the steel arm with which it is ordinarily attached to the wheel hoe.

No. 35—Tool complete as shown.....Each, 7.00

Weight packed, 8½ lbs.

Planet Jr. Farm and Garden Tools—Continued

No. 26 Drill Seeder



The Wide Tread Wheels on the No. 26 Drill Seeder will prevent sinking in muck lands and will make it easier to run in all soils. The Index is very accurate and once set it stays set until the seeding is finished; and it is one unit, built right into the machine and not likely to be lost, as is the case where a number of discs are required for different sizes of seed. Opening Plow is an improved type, and makes clean cut drills. It has wings running from the point to the back, which prevent the soil from falling back into the drill, and prevent the wind from blowing light seed away. Shaft Drive, so successful on other Planet Jr. Seeders, is used on this machine because it has been proven by tests to be the most satisfactory. Shaft Drive Gear is protected from the dust and dirt dropping from the front wheel. The Feed Wheel is special and many tests have shown it to be the best in use. The Spring Feed Arms do not crush or break the seeds. Flow of Seed is automatically stopped by raising the handles when turning at the end of the rows or at any other time, and in this way it is not possible for any of the seed to be wasted. The Floating Coverers adapt themselves to any kind of soil and are more satisfactory than others. They can be removed whenever desired. There are two markers, one on each side. When one is up the other is down on the soil and the weight can be adjusted to make a clean cut mark in any soil, whether it be sand, muck or a heavy soil. The Hopper has a capacity of four quarts. It can be removed in a second by unscrewing one wing nut—very helpful in emptying or filling the hopper. The Scrapers are very useful; front wheel has an adjustable scraper; the rear wheel has a spring-tension scraper.

The No. 26 Seeder is constructed almost entirely of steel, is very substantial, and will give a great many years of absolutely satisfactory service. There is practically nothing to get out of order. The bent handles are regular equipment. They are adjustable for height.

No. 26—Tool complete as above.....Each, 22.50

Weight, packed, 68 lbs.

No. 20D Fertilizer Drill

Shipped from factory, Philadelphia, Penn.

The most successful and economical way to fertilize is to apply part of the fertilizer in the row at seeding time, and then use the No. 20D Drill to side-dress with a quick acting fertilizer. To meet the demand for a larger drill for fertilizers only, we now supply the No. 20D Fertilizer Drill, the most efficient and practical of its kind. The driving wheel is 20 inches in diameter with a 2-inch face with a series of pins on one side, which operates the agitator lever. The hopper holds one-half bushel. An oscillating feeding shelf covers the open bottom of the hopper, and by quick reciprocating motion feeds the fertilizer evenly through a rear discharge spout which is regulated in size by a feed rod and an index at the top of the handle. The index is graduated and is controlled by a brass thumb nut and slide. Instantly thrown out of gear by the feed rod. This type spout makes it possible to distribute the fertilizer in three ways, to the right and left; down the center of the row; or, all to one side, right or left, as desired. The No. 20D Drill will sow fertilizers evenly 100 to 1,000 lbs. to the acre. With material in any reasonable condition it will not clog; galvanized, no cogs, gears or stirring devices. Will give perfect satisfaction.

A Pea and Bean Planter attachment can be supplied for use with this machine. It includes opening plow, coverer, roller and marker. With it, peas and beans can be sown in any quantity, with the greatest regularity.

No. 20D—Fertilizer, as above.....Each, 33.00

No. 20 —Fertilizer complete with Pea and Bean Attachment.....Each, 40.00

No. 20D weighs 61 lbs.; No. 20, 83 lbs. Packed complete.

Planet Jr. Farm and Garden Tools—Continued

No. 119 Garden Plow and Cultivator

This tool is light and strong, and is built with the same care for detail which has made the "Planet Jrs." the leaders among the hand tools of the world.

The wheel is 24-inch in diameter with a rim 1½ inches wide, insuring easy running in the lightest soil.

The equipment is so complete that it will meet all the needs of the ordinary garden, where the adjustments and refinements of the higher priced Wheel Hoes are not required.

Handles are strong and are provided with "plow handle" grip. Adjustable for height to suit adult or child.

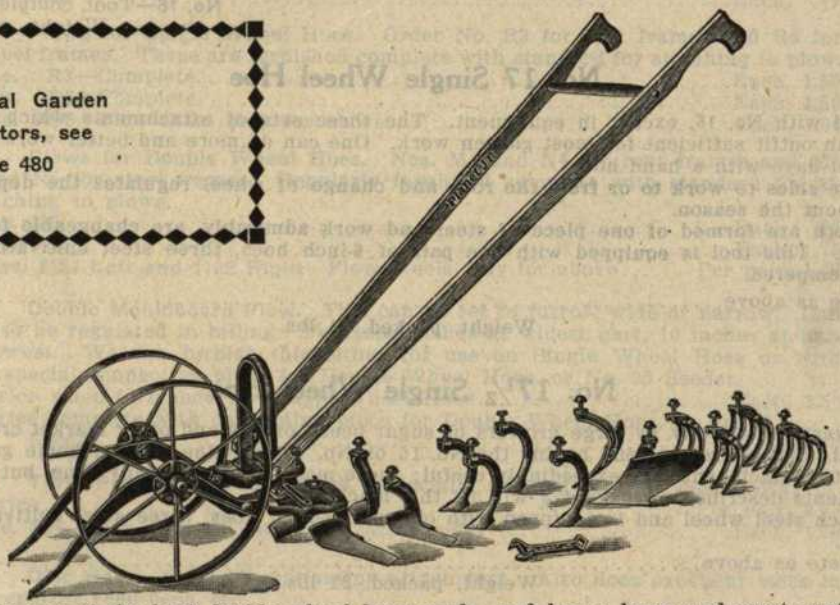
The depth of work is controlled by adjusting the standards where they bolt to the handles. This is so arranged that with any given height of the handles there is practically no change in the pitch of the teeth when the depth is changed.

Equipped with 24-inch steel wheel, one 1¼-inch cultivating tooth, one 4-inch cultivating tooth, one plow and one reversible scuffle blade.

No. 119—Tool, complete as shown.. 5.80
Weight, packed, 16½ lbs.

No. 11 Double Wheel Hoe

For Rival Garden Cultivators, see page 480



No. 11 Planet Jr. is one of the best double wheel hoes made, and has a large and most useful set of attachments. The steel frame can be set at different heights to suit any kind or depth of work, and the attachments or their position can be changed in a few seconds.

The arch is high enough to straddle a row until plants are 20 inches high, and this insures close work and death to weeds. It is easier to work the crop closely when hoeing both sides at the same time. This tool has 14-inch steel wheels and is equipped with one pair 6-inch hoes, one pair 4½-inch hoes, four steel cultivator teeth and one pair plows, all oil tempered; also has two 3-tooth rakes, two 5-tooth rakes and two leaf lifters.

No. 11—Tool, complete as above.....Each, 16.75
Weight, packed, 39 lbs.

No. 12 Double Wheel Hoe

This tool is identical with the No. 11 Double Wheel Hoe, except that it is equipped with one pair 6-inch hoes, four steel cultivator teeth and one pair of plows, all oil tempered; also has two leaf lifters. The attachments sold with the No. 12 are what gardeners use most, and the others can be added as wanted.

No. 12—Tool, complete as above.....Each, 13.00
Weight, packed, 33 lbs.

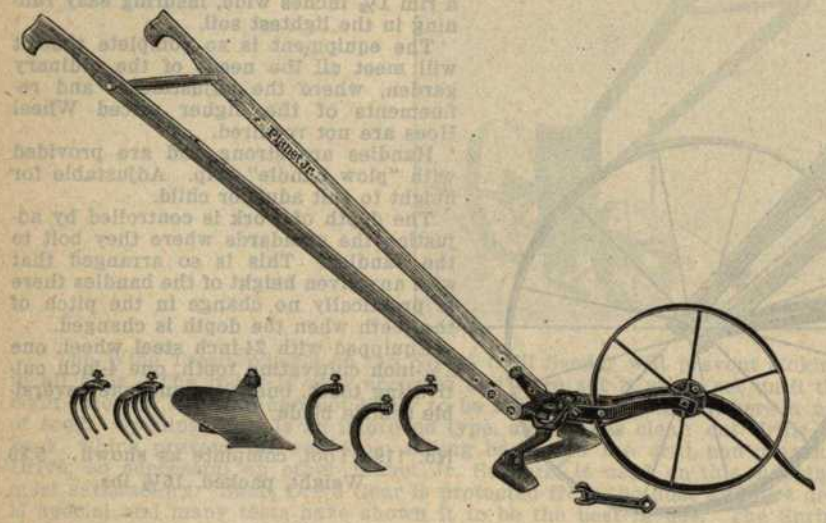
No. 13 Double Wheel Hoe

No. 13 has the same frame, wheels and handles as Nos. 11 and 12, but is equipped only with one pair of 6-inch hoes, oil tempered.

No. 13—Tool, complete as above.....Each, 9.25
Weight, packed, 28 lbs.

Planet Jr. Farm and Garden Tools—Continued

No. 16 Single Wheel Hoe



The frame is made of steel and is practically indestructible. The wheel arm and leaf guard are steel also. The handles are adjustable in height for different operators, and for depth of work.

All the steel parts are high carbon steel, oil tempered, finely formed, finished and polished.

The plow is of superior design, complete with landside; is large and capable of heavy work.

The shield-pointed hoes are the most useful of all the tools. They are finely shaped, neat and narrow, and leave the ground level.

The cultivator teeth—a set of three of fine design, adjustable for pitch, do invaluable service in deep culture.

Rakes of different widths enable the operator to work many different widths of rows.

The steel leaf guard is for use where plants have fallen or been blown over, as peas, strawberries, beets, carrots, etc. It makes easy work close to the crop, where otherwise impossible to work at all, and with no increase in labor.

No. 16 Tool has 15-inch steel wheel and is equipped with one pair of 6-inch hoes, three cultivator teeth and one large garden plow, all oil tempered; also has one 4-inch rake, one 7-inch rake and one leaf guard.

No. 16—Tool, complete as shown. Each, 10.75

Weight, packed, 26 lbs.

No. 17 Single Wheel Hoe

No. 17 is identical with No. 16, except in equipment. The three sets of attachments which go with it are all the finest of their kind—an outfit sufficient for most garden work. One can do more and better work with it in one day than can be done in several days with a hand hoe.

The hoes exchange sides to work to or from the row, and change of wheel regulates the depth. The hoes are constantly useful throughout the season.

The cultivator teeth are formed of one piece of steel and work admirably, are changeable for pitch and are useful for marking out rows. This tool is equipped with one pair of 6-inch hoes, three steel cultivator teeth, and one large garden plow, all oil tempered.

No. 17—Tool, complete as above.....Each, 9.00

Weight, packed, 24 lbs.

No. 17½ Single Wheel Hoe

No. 17½ is used very extensively by large growers of sugar beets, onions and other market crops where thorough and rapid work is essential. But we recommend buying the No. 16 or No. 17 machine for the home garden, as they cost but little more and the extra attachments are exceedingly useful; these may be added at any time, but cost more bought separately. Extra attachments described on page 473 will fit this machine.

No. 17½ has 15-inch steel wheel and is equipped with one pair 6-inch hoes, three steel cultivator teeth and one leaf lifter, all oil tempered.

No. 17½—Tool, complete as above.....Each, 8.25

Weight, packed, 21 lbs.

No. 18 Single Wheel Hoe

Same as No. 17, except the equipment. The frame is steel, has 15-inch steel wheel and is equipped with one pair 6-inch hoes, oil tempered. These tools are the ones most constantly used throughout the season. Other attachments can be added as needed.

No. 18—Tool, complete as above.....Each, 7.00

Weight, packed, 19 lbs.

Juvenile Wheel Hoe

For the Boys and Girls.

This new machine is built for children between the ages of 6 and 16. In every detail it is as well constructed as other Planet Jr. garden tools. It is of the same design as all standard Single Wheel Hoes and comes equipped with three narrow cultivator teeth.

Juvenile Wheel Hoe, complete as shown.....Each, 4.25

Weight, packed, 6 lbs.

Planet Jr. Farm and Garden Tools—Continued

Extras for Planet Jr. Hand Machines

Planet Jr. Seeders and Wheel Hoes have been in successful use so many years we have many calls for wearing parts. If anything not named below is wanted, send for special repair circular, naming the machine.

Hoes.

Hoes. These hoes are furnished in various sizes. The measurements given are the cutting widths of each blade. Therefore, a pair of 6-inch hoes cuts 12 inches.

Size	Casting Numbers	
4½-inch,	S100/S101	Per pair, 1.30
6 -inch,	S100/S101	Per pair, 1.40
7½-inch,	S100/S101	Per pair, 1.60
9 -inch,	S100/S101	Per pair, 1.75

Steels only for S100/S101 and C & D1 standards. These are the steel blades only for the hoes above listed.

4½-inch,	No. 4054/4060 for S100/S101 or No. 553/554 for C & D1	Per pair, .70
6 -inch,	No. 4061/4062 for S100/S101 or 1092/1093 for C & D1	Per pair, .80
7 -inch,	No. 1700/1701	Per pair, .90
8 -inch,	No. 997/998	Per pair, 1.00

Orders must give numbers on old part.

Peat Land Hoes.

Peat Land Hoes. Similar to the C & D hoes, but with extra wide and high shields to prevent dirt from falling back and covering the plants. Made in 6-inch cut only.

6-inch.....Per pair, 2.75

No. 1395 Cultivator Teeth. A splendid cultivator tooth for all-around work.

No. 1395.....Each, .40

No. 2775 Narrow Cultivator Teeth. Especially designed for hard soil.

No. 2775.....Each, .40

No. 1395 Cultivator Teeth.

Plows for Single Wheel Hoes. Order No. R3 for cast frames and R6 for steel frames. These are furnished complete with standard for attaching to plow.

No.	R3—Complete	Each, 1.50
No.	R6—Complete	Each, 1.50
No.	1096—Plow Steel only for above	Each, 1.00

Plows for Double Wheel Hoes. Nos. M4 and N4 for cast frames and M5 and N5 for steel frames. Regularly furnished complete with standard for attaching to plows.

No.	M5	Each, .75
No.	N5	Each, .75
Nos.	1121 Left and 1122 Right—Plow Steels only for above	Per pair, 1.00

No. 2775 Narrow Cultivator Teeth.

Double Mouldboard Plow. This can be set to furrow wide or narrow. Can also be regulated in hilling. Fourteen inches at widest part, 10 inches at narrowest. We can furnish this either for use on Single Wheel Hoes or with a special connecting piece for Double Wheel Hoes, or No. 25 Seeder.

Price when furnished for Single Wheel Hoes.....Each, 2.50

Price complete with connecting piece for Double Wheel Hoes, or No. 25 Seeder.....2.90

Three-Prong Cultivator Teeth. Specially adapted for fine deep work.

Price.....Per pair, 2.25

No. S94—Five Prong Cultivating Attachment.....Each, 1.60

Five-Prong Attachment.

Disc Hoes. Splendid cultivating attachment. Also does excellent work in preparing seed beds, etc.

Price.....Per pair, 3.50

Onion Harvester. These make splendid weeders. Especially designed for onions and onion sets.

8-inch.....Each, 1.75

Path Cleaners. These can also be used as cultivating tools and weeders.

12-inch.....Each, 2.75

Rakes. We furnish these in three sizes.

Three-tooth	Per pair, 1.50
Five-tooth	Per pair, 2.00
Seven-tooth	Per pair, 3.00

Handles for Seeders and Wheel Hoes.

Price.....Per pair, 1.40

Path Cleaner

Bent Handles. We can furnish the bent handles for all of our seeders and wheel hoes, if specially ordered from factory.

Plow for Single Wheel Hoe.

Plows for Double Wheel Hoe.

Disc Hoes.

Double Mouldboard Plow.

Three-Prong Cultivator Teeth.

Onion Harvester.

Rakes.

NOTE—All attachments on this page will fit Planet Jr. Single and Double Wheel Hoes and Combined Seeders and Wheel Hoes, excepting Nos. 31 and 119.

Planet Jr. Farm and Garden Tools—Continued

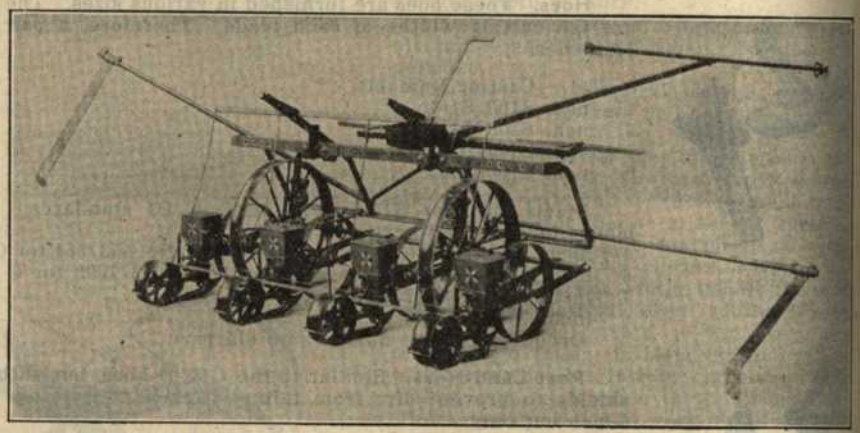
PLANET JR. MULTIPLE SEEDERS

Shipped from factory, Philadelphia, Penn.

No other gang or grain seeder is capable of handling the great variety of vegetable seeds with the accuracy of the Planet Jr. The seeding device is the same on all the machines listed below and they will plant all of the vegetable seeds commonly used, accurately, at the proper depth and thickness and economically.

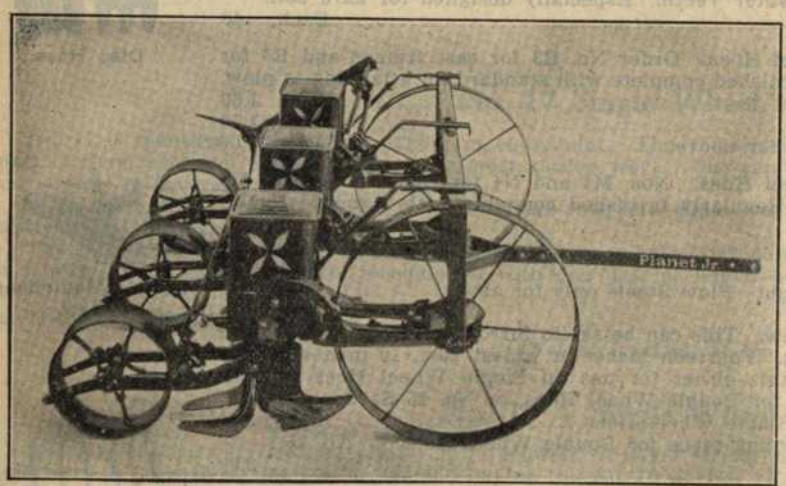
No. 154 Four-Row Seeder

This Multiple Seeder, made up of four seeding units, is designed for all around planting with a team. The planting can be done on either prepared level ground, four rows on beds, or single or double rows on beds for irrigation purposes. The 24-inch wheels are adjustable from 36 to 70 inches apart. For planting on beds, the wheels can be moved in to fit the ditches or alleys, two drills planting the center bed, the two drills outside of the wheels planting the adjoining beds. The wide range of adjustments and flexibility make it possible to meet almost any requirements with this seeder. It can be used with only two of the drills if desired, planting rows from 9 to 60 inches apart. It can also be equipped with additional seeding units up to eight, to sow 8 inches apart, or can be equipped with extra long pipe and frame for wider seeding. These extras are furnished only at additional cost.



No. 154

No. 154—Four-Row. Weight, packed, 435 lbs.....Each, 155.00



No. 152

No. 152 Three-Row Seeder

This Seeder is similar to the Multiple Seeder shown above except it includes three only of the seeding units and is arranged for attaching to small garden tractors. It is arranged so that rows can be planted 11 to 18 inches apart and a marker is included. It is easily handled at ends of rows and can be driven just as straight and easily as other types of Multiple Seeders. Each make of garden tractor requires a special hitch. It is necessary, therefore, to specify the make, year and model of tractor with which this Seeder is to be used.

No. 152—Three-Row. Weight, packed, 189 lbs. . . . . Each, 75.00

No. 157 Two-Row Seeder

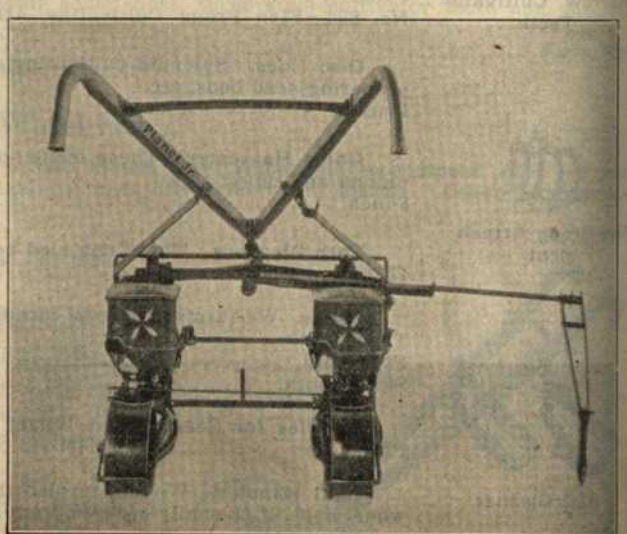
This Seeder is similar to the No. 152 Multiple Seeder shown above except it includes two only of the seeding units. It is particularly adapted for use on beds and can be used with either one horse in the center, drilling one row on each of two beds, or with a small team in the alleys with both drills between, on one bed. The drills are adjustable from 10 to 24 inches apart. It is equipped with clutches to throw the feed wheels out of gear going to and from the field. Easily handled at end of rows. The marker attachment is not regularly furnished, but can be furnished as an extra. This Seeder is so light that one man can push it for small amounts of work.

No. 157—Two-Row. Weight, packed, 117 lbs...Each, 52.50

No. 158 Four-Row Seeder

This Seeder is similar to the No. 157 except it includes four seeding units and is especially adapted for use in irrigated countries on beds. It is not recommended for level planting. The inside drills can be set 20 to 30 inches apart, and the outside drills 10 to 45 inches apart. No marker included.

No. 158—Four-Row. Weight, packed, 220 lbs...Each, 98.50



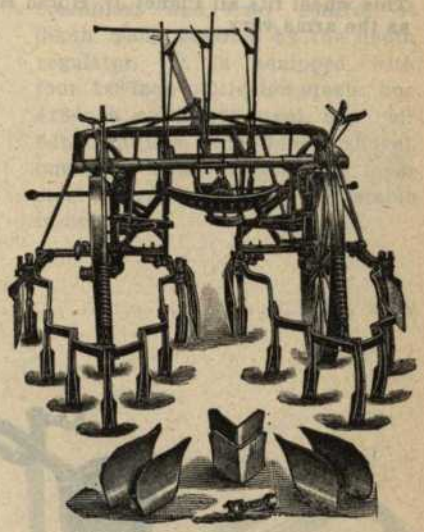
No. 157

For additional detail information on the above Seeders, or any other Planet Jr. Tools, ask for special catalog.

Planet Jr. Farm and Garden Tools—Continued

PLANET JR. RIDING CULTIVATORS

No. 72 Two-Row Pivot Wheel Cultivator

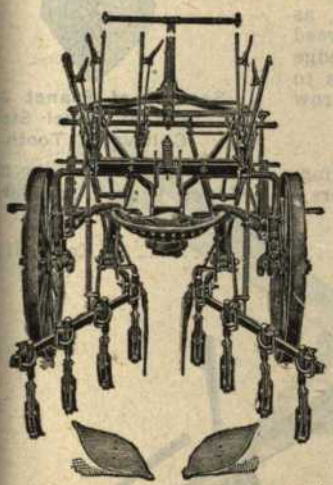


The Planet Jr. No. 72 Two-Row Cultivator is one of the best tools ever sold for the thorough and economical cultivation of corn and potatoes, and all other crops planted in rows 28 to 44 inches apart. It easily saves its whole cost in one season on fifty acres. The No. 72 Planet Jr. Two-Row Cultivator completes two rows at one passage, 28 to 44 inches apart, inclusive. It is especially built to do this when the rows are irregular. Operator can change the width of gangs while in motion to suit varying rows, by means of convenient levers. The tongue lever ratchet and pins are made of steel, as are also the ratchets and pins of the gang-regulating levers, while adjustable stops make the tool return to the same depth of work automatically after turning at the headlands. The tool has five levers and they simplify its control. The center lever adjusts the hinged tongue, regulating the depth of the front teeth and leveling up the machine to suit all heights of neckyoke. The outside levers regulate the depth of the teeth in the rear, and the intermediate levers change the width of the gangs to suit irregular planting, without stopping the team. The levers open and close both sides of the frame equally, so that the teeth always work the spaces thoroughly. The standards are hollow steel; front standards are all adjustable for depth and angle, throwing to or from rows. Break pin type, except on special order. The four adjustable standards take the plows, which plow to and away from the row, and enable operator to cover at one passage, two rows of manure, potatoes, corn, beans, etc., that have been dropped in furrows. The plain bearing pivot wheels work quickly and make cultivation of crooked rows easy. Can be made stationary when desired. The arch and seat are unusually high, 34 inches in the clear; the seat is adjustable back and forth and in height. Each tool is furnished with four plant shields, adjustable in height and swing to clear obstruction. In listed corn the hinged tongue, adjustable frame and front teeth combine to make this difficult cultivation satisfactory. In checkrows it surprises everyone. The equipment: seven 2¼-in. x8-in. reversible, high carbon, beveled steel teeth of the best design and finish are carried by each frame, so that the work is thorough, even at the width of 44 inches; two reversible 7-in. plows, used in place of the front cultivator teeth to plow to or from the row; two 8-in. shovels, useful for marking out two rows at once from 28 to 44 inches apart or for hilling. All steels specially hardened.

No. 72D is same as No. 72 Cultivator complete, except does not include the two pairs of reversible plows and two 8-in. shovels.

No. 72 —Weight packed, 585 lbs.....Each, 125.00
No. 72D—Weight packed, 566 lbs.....Each, 120.00

No. 76 Pivot Wheel Riding Cultivator, Plow, Furrower and Ridger with Discs



The No. 76 is a comparatively new implement which combines in itself nearly all the practical advantages possible in one tool, and is a fine tool for every farmer who cultivates anywhere from ten to hundreds of acres. The extra wide arch is 34 inches high and will work corn safely up to four feet. The frame and tongue are steel. The pivot wheels change in width easily, to suit all rows from 28 to 48 inches, and they make guiding a pleasure. The gang frames are extra heavy, but improved levers with lifting and depth-regulating springs make their perfect control easy. Each pin-break type standard is made with two holes in the lower end so that as the cultivator steels wear down they may be let down for further use. The draft control is such as to insure satisfactory work in all conditions of soil. Adjustable stops regulate the depth so that the tool, after turning at the ends of the rows, goes to work automatically at the exact depth it was set before. Malleable pivots and steel axles, both practically dust proof; and steel ratchets and pins. The discs can be set to throw either to or from the row. When used to throw away they act as plant shields. The seat is large and comfortable, adjustable up and down, back and forward. The new levers and springs regulate the depth and pressure of the teeth. The control lever operates the hinged tongue, regulating the depth of the front teeth and leveling the machine; the same lever moves the teeth instantly, either closer to or further from the row, as desired, while the team is in motion. All teeth are specially hardened. Improved spring lifting levers make control of the gangs rapid and easy. The tool works rows from 28 to 48 inches apart, cultivating, plowing or hilling. It marks out rows from 24 to 48 inches apart, two at once, and with the plows will cover or make up drills ready for seed sowing or for planting. This cultivator is simple, roomy, strong and easily handled. Will not get out of order and its work is admirable. Includes 8 2¼x10-in. Cultivator Steels, 1 pair 7-inch Plows, 2 8-inch Shovels, 1 pair 14-inch Discs, Spring lift.

No. 76D is same as No. 76 Cultivator complete, except does not include the Cultivator Steels, Discs, etc., but does have a pair of plant shields.

No. 76 —Weight packed, 528 lbs.....Each, 94.00
No. 76D—Weight packed, 496 lbs.....Each, 87.50

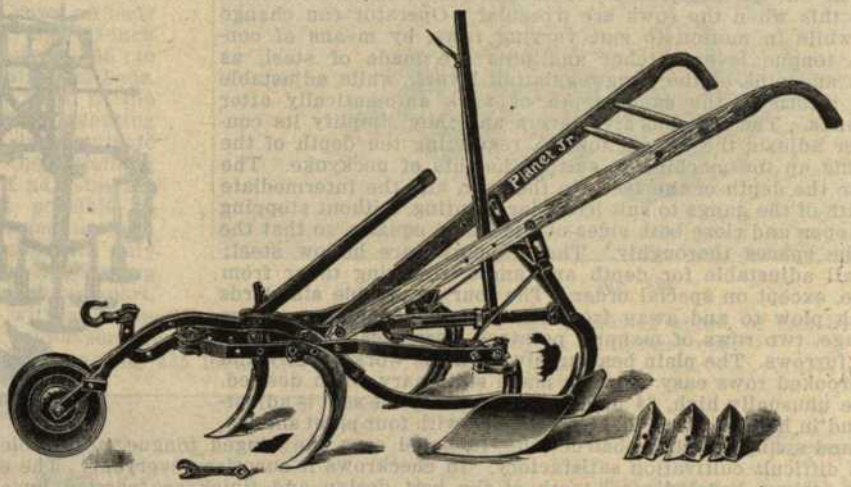
Planet Jr. Farm and Garden Tools—Continued

ONE-HORSE IMPLEMENTS

Planet Jr. Horse Hoes are more widely known and bear a higher reputation than any horse hoes ever made. The various tools are the result of a thorough knowledge of both farming and manufacturing, and very naturally they have attracted the attention of farmers throughout the world.

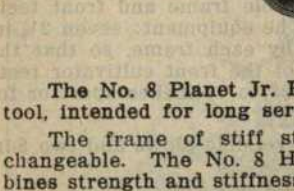
The new steel gauge wheel, having no spokes, will not clog with cornstalks, stones or other trash, and no sand or dirt can be carried up in on the inside of the rim to drop on the bearings. The hub is cheaply renewed when necessary. This wheel fits all Planet Jr. Horse Hoes or Harrows. When ordering extra wheels, specify for which machine wanted, as the arms vary.

No. 8 Horse Hoe and Cultivator



The No. 8 Planet Jr. Horse Hoe and Cultivator is especially strong, being braced so as to make a stiff, unyielding tool, intended for long service.

The frame of stiff steel is extra long and one or two inches higher than usual, and the standards are interchangeable. The No. 8 Horse Hoe and Cultivator closes to 10 inches and opens to 25 inches. The lever expander combines strength and stiffness with simplicity. The play of the ordinary lever expander is largely avoided and the change in width is easy and almost instantaneous. The standards are hollow steel, the upper portion inclosing the frame, mutually stiffening it, and being stiffened in return; being steel, they polish in use. They are round in the throat and can scarcely be clogged; are also extra high and the rear tooth has extra clearance behind the side teeth, preventing clogging and making good work. The teeth are made of beveled steel, especially hardened. They are thickest in the center (see cut), so they are self-sharpening, as the point retains its shape and strength, thus greatly prolonging the life of the steel. Every steel has "Planet Jr." on the back.



Steel Wheel.

The side standards take either cultivator steels or hoes.

The hillers or plows are reversible, and are used either pointed or rounded edge foremost. They work well as plows and throw both to and from the rows. When reversed they are invaluable for hoeing. The slanting rounded edge may be run close to the plants without being dangerous to the roots; when thus reversed they cut away from the row just like a disc.

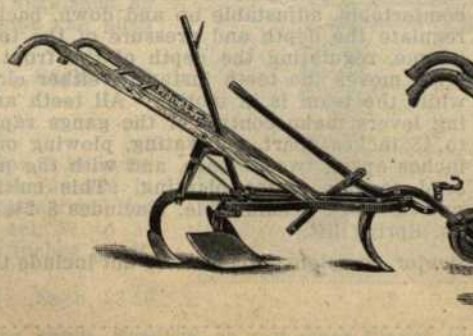
Section of Planet Jr. Patent Bevel Steel Cultivator Tooth.

The above illustrates this tool when used for plowing toward the row and for hilling. This tool is regularly furnished with four 3x8-inch cultivator steels, one 4x8-inch cultivator steel, two 6-inch hillers, one 7-inch shovel, one lever wheel, one lever expander and one depth regulator.

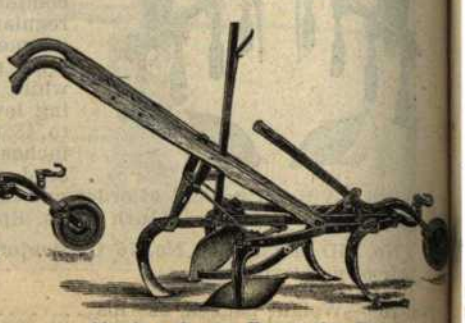
No. 8—Tool, complete as above.....Each, 21.50

Weight, packed, 83 lbs.

As a Cultivator.



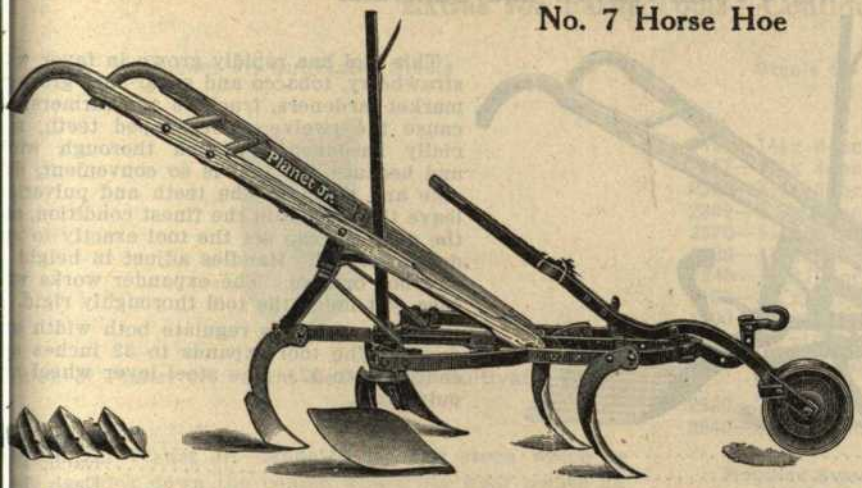
For Furrowing.



Hoeing Away From the Row.

Planet Jr. Farm and Garden Tools—Continued

No. 7 Horse Hoe



The No. 7 Horse Hoe is the No. 8 without the depth regulator. It works the same as No. 8 in every way, except that it lacks the steadiness and easy control of depth made possible by the depth regulator. It is equipped with four 3x8-inch cultivator steels, one 4x8-inch cultivator steel, one pair 6-inch hillers, one 7-inch shovel, one lever expander and one lever steel wheel. Handles adjustable in height.

No. 7—Tool, complete as above.....Each, 20.50

Weight, packed, 77 lbs.

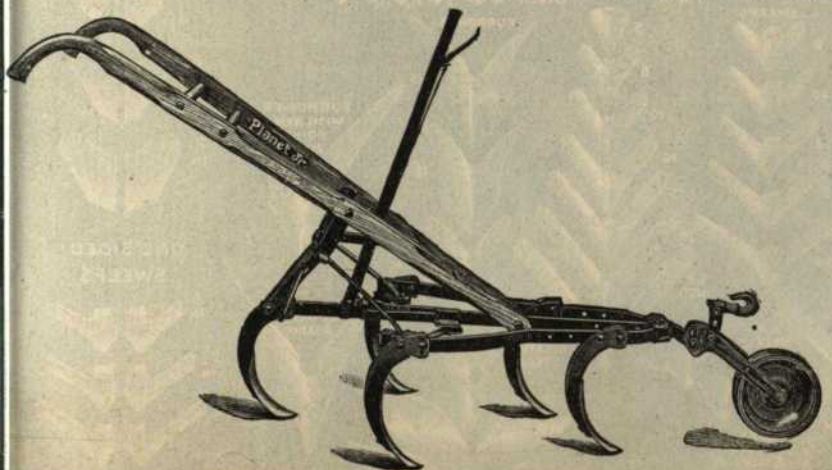
No. 9 Horse Hoe

No. 9 Horse Hoe is an admirable tool and is identical with No. 7, except that it has a plain wheel instead of the lever wheel. This tool has become popular because of its strength, lightness, easy change of width and good work. All steels specially hardened. The handles are adjustable in height and also sidewise. It is so strongly built as to withstand incredible strain, yet it is easy to handle. One can cultivate to any reasonable depth, and adjust for any width. Equipped with four 3x8-inch cultivator steels, one 4x8-inch cultivator steel, one pair 6-inch hillers, one 7-inch shovel and one lever expander.

No. 9 —Tool, complete as above.....Each, 18.75
No. 9D—Tool, complete without wheel.....Each, 16.25

No. 9 weighs 70 lbs.; No. 9D, 64 lbs., packed complete.

No. 9PC Plain Cultivator



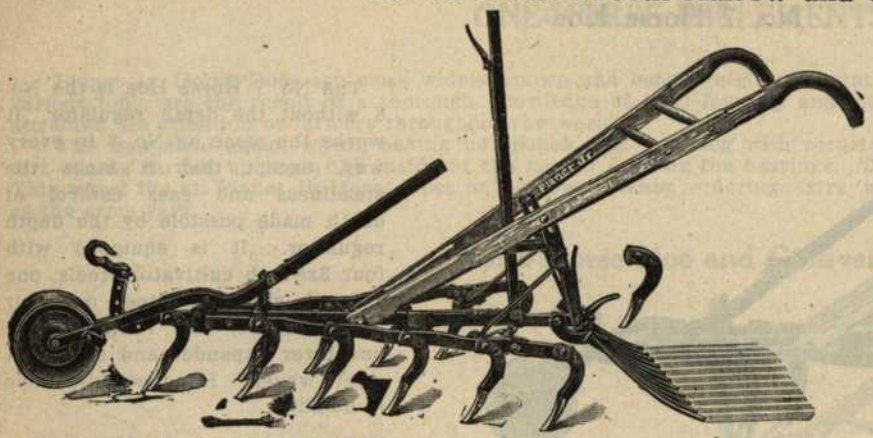
Same as No. 9 Horse Hoe, except is equipped only with four 3x8-inch cultivator steels and one 4x8-inch cultivator steel. The patent specially hardened beveled steel teeth keep sharp and add 50 per cent to the wear. It is light, yet strong, with steel wheel, hollow steel standards and steel draft hook. Simple and practical, it is always ready for business.

No. 9PC —Tool, complete as above.....Each, 17.00
No. 9DPC—Tool, complete without wheel.....Each, 14.75

No. 9PC weighs 63 lbs.; No. 9DPC weighs 56 lbs., packed complete.

Planet Jr. Farm and Garden Tools—Continued

No. 90 Twelve-Tooth Harrow and Cultivator



This tool has rapidly grown in favor wi strawberry, tobacco and sugar-beet grower market-gardeners, truckers and farmers, be cause the twelve chisel-shaped teeth, spe cially hardened, do such thorough work and because the tool is so convenient, du able and strong. The teeth and pulverize leave the ground in the finest condition, an the operator can set the tool exactly to an depth desired. Handles adjust in height t suit boy or man. The expander works wi ease, yet holds the tool thoroughly rigid.

The hand levers regulate both width an depth. The tool expands to 32 inches an contracts to 12. Has steel lever wheel an pulverizer.

No. 90 —Tool, complete as above.....Each, 21.5
No. 90B—Tool, complete less pulverizer.....Each, 17.
No. 90D—Tool, complete less pulverizer and wheel.....Each, 14.
No. 90 weighs 74 lbs.; No. 90B, 66 lbs.; No. 90D, 52 lbs., packed complete.

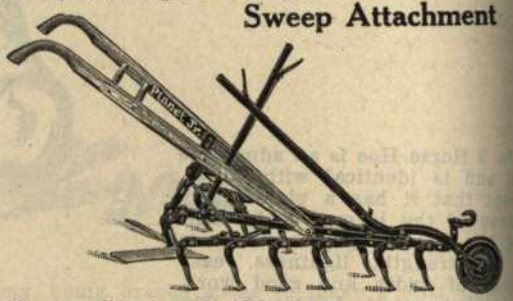
Beet Hoes

Harrow fitted with Beet Hoes.

This illustrates the Beet Hoes attached to 12-tooth harrows. They are used for hoeing beets and all crops in **rows from 15 to 30 inches apart. They do admirable work, leaving the ground level. They work close to the row with a slanting forward rounded cut, and raise the leaves out of danger.**

Beet Hoes, including special standards.....Per pair, 2.80

Sweep Attachment



Harrow fitted with 18-inch sweep attachment.

An 18-inch improved sweep with special standard, use in place of the pulverizer, for leveling and weed cutting

No. 1—Sweep Attachment, with standard.....Each, 1.

We can also furnish a set of three sweeps and standards to go on a harrow consisting of two 10-inch and one 15-inch improved sweeps and standards.

No. 2—Sweep Attachment, complete set as above. Each, 4.

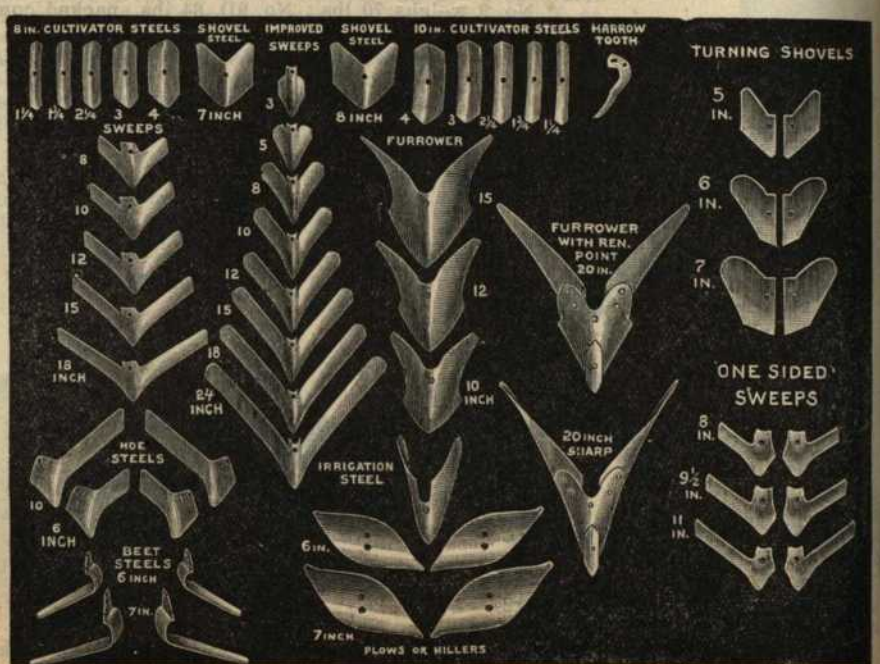
Strawberry Runner Cutter

This is a 10-inch tempered steel disc mounted on an outrigger; it fits on either side of our No. 90 12-tooth harrow. It has a caster action, is adjustable for depth and sidewise, and has an adjustable leaf guard which lifts the leaves to avoid trimming them off and weakening the plants. It is thoroughly approved by strawberry growers. With handle it can be used independently of the cultivator.

Strawberry Runner Cutter, less handle..Each, 4.00

Extras for Farm Tools

The various shapes of Cultivating Steels illustrated below are for use on Planet Jr or other makes of implements. They are hardened by a special process which produces steels that give splendid satisfaction under the most exacting conditions.



Planet Jr. Farm and Garden Tools—Continued

Extras for Farm Tools—Continued

Planet Jr. Cultivator Steels

Section of Planet Jr. Patent Bevel Steel Cultivator Steel.

Steels for Planet Jr.—Made of beveled steel, which is twice as thick down the center where the wear comes as at the sides, gradually tapering from one to the other. This new shape causes the points to remain sharp and strong, and they give much longer service. All regular Planet Jr. steels have patent bolt sleeves to prevent bolts from pulling through, and therefore require but a small-headed bolt and scour better.

Regular Sweeps—Fit all Planet Jr. one or two-horse cultivators, and are made to cut 6, 8, 10, 12, 15, 18 or 24 inches. Particularly pleasing to growers of cotton, corn, coffee, sugar cane, etc., and in orange groves.

Improved Flat Sweeps—Made to cut 3, 5, 8, 10, 12, 15, 18, or 24 inches. These are flatter than the regular sweeps and leave the ground more nearly level. They will not fit horse hoe standards, but will fit all other standards, and also all standards on two-horse cultivators.

No. 3241 Alfalfa Steels

1¾x9 inches. It is quite necessary to cultivate alfalfa to get the best results. They break and stir the soil without turning it upside down or tearing out the alfalfa roots injuriously.

Hoe Steels—Two sizes—6 and 10-inch cut. Horse hoes equipped with these on the side standards and a sweep on the rear make an admirable combination. They fit all horse hoe side standards.

Furrowers. Made in five styles and sizes. The 10-inch, 12-inch and 15-inch are one piece and designed on fine lines. The 20-inch are made in two styles; with regular body, adjustable wings and renewable point and with sharp body, adjustable wings and renewable point. The first style of the 20-inch is sent, unless otherwise ordered.

Steels to fit Planet Jr. Horse Hoes and Plain Cultivators.

No.	Weight, lbs.	oz.	Price
1156—1¼x 8-inch Steels		11	.18
2367—1¾x 8-inch Steels		11	.22
2368—2¼x 8-inch Steels		12	.25
2369—3 x 8-inch Steels		14	.28
2370—4 x 8-inch Steels	1	2	.34
1888—1¼x10-inch Steels		13	.23
1249—1¾x10-inch Steels		14	.26
1199—2¼x10-inch Steels	1		.30
1200—3 x10-inch Steels	1	1	.38
1201—4 x10-inch Steels	1	8	.42
3241—1¾x 9-inch Steels (Alfalfa Teeth and Bolt)	1	2	.45
2539—7-inch Shovel Steel	1	9	.42
2540—8-inch Shovel Steel	1	12	.46

Regular Sweeps fit all Planet Jr. One and Two-horse Cultivators.

1614— 6-inch Sweep		15	.45
1169— 8-inch Sweep	1	4	.48
1170—10-inch Sweep	1	6	.55
1171—12-inch Sweep	1	9	.62
1172—15-inch Sweep	1	14	.77
3148—18-inch Sweep	2	2	1.00
3491—24-inch Sweep	2	13	2.40
3583/4 — 8 -inch One-sided Sweeps....Pair,	2	4	1.20
3585/6 — 9½-inch One-sided Sweeps....Pair,	2	8	1.30
3587/8 —11 -inch One-sided Sweeps....Pair,	2	12	1.50

Improved Flat Sweeps fit all Planet Jr. One and Two-horse Cultivator Standards, Excepting Horse Hoe Side Standards.

2731— 3-inch Imp. Sweep and Bolt		14	.48
1494— 5-inch Imp. Sweep and Bolt		15	.55
1495— 8-inch Imp. Sweep and Bolt	1	6	.68
1496—10-inch Imp. Sweep and Bolt	1	10	.80
1497—12-inch Imp. Sweep and Bolt	1	14	.95
1498—15-inch Imp. Sweep and Bolt	2	5	1.10
1499—18-inch Imp. Sweep and Bolt	2	10	1.40
3582—24-inch Imp. Sweep and Bolt	3	3	2.75

Hoe Steels fit Planet Jr. Horse Hoe Side Standards.

1163/4— 6-inch Hoe and Steel Bolt....Pair,	2	10	1.50
1165/6—10-inch Hoe and Steel Bolt....Pair,	3	12	1.80

Beet Hoe Steels fit Planet Jr. Two and Four-Row Beet Cultivators and 12-Tooth Harrows.

2144/5—6-inch Beet Hoe Steels....Pair,	2	6	1.50
3426/7—7-inch Beet Hoe Steels....Pair,	3	4	1.50
2188/9—9-inch Beet Hoe Steels....Pair,	3	4	2.00

Hillers and Plows fit all Planet Jr. One and Two-Horse Cultivators, excepting 12-Tooth Harrow.

1167/8—6-inch Hillers....Pair,	4	10	1.60
495/6—7-inch Plows....Pair,	5	6	2.00

Furrowers fit all Planet Jr. Cultivators, excepting 12-Tooth Harrows.

1161—10-inch Furrowers	3	5	1.25
2621—12-inch Furrower and Bolt	4	5	1.60
1162—15-inch Furrower and Bolt	6	5	2.00
292x—20-inch Furrower and Bolt, N. S....12		5	3.75
293x—20-inch Furrower and Bolt, Sharp....11		8	3.75

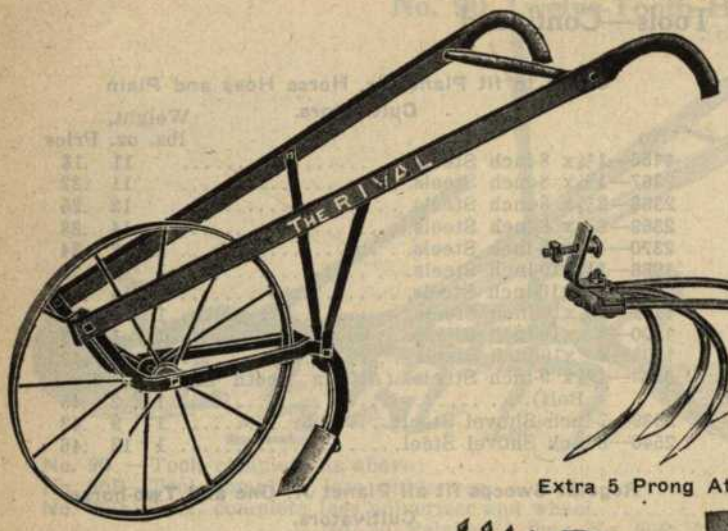
Turning Shovels.

3822/3—5-inch Turning Shovels....Pair,	2		.80
3580/1—6-inch Turning Shovels....Pair,	3		.90
3824/5—7-inch Turning Shovels....Pair,	4		1.20
No. 3 Wrench		4	.18
Bolts for all Steels		1	.04½

All popular numbers carried in stock. Others from factory, Philadelphia, Pa.

Rival Garden Plow

The Most Popular Balance Frame Plow on the Market.



Extra 5 Prong Attachment

Regular Attachments

It is safe to say that there is no similar tool made that in ease of operation, high-grade material, and fine finish will equal the "Rival." The beam is made of a very stiff steel, and is constructed so that when handles are attached the center of weight falls directly over the pivoting point which forms the axle for wheel, making it self-balancing, and which admits of its being propelled with a minimum of power. On account of the handles being bolted to beams in front of the axle it has a pulling tendency rather than to push it into the ground. Handles can be raised and lowered to suit man or boy. It has such wide adjustments of the handles that the tool can be put in the ground at almost any angle desired. The different extras used on the "Rival" are Shovel, Calf Tongue, Moldboard, and Weeder Rake combined as shown. Wheel is 24 inches in height, made of steel wire spokes and 1⅛-inch steel tire. The "Rival" does excellent work. Handles are painted red; the iron parts green and wheel black. Dealers will find this a fine seller. Weight each, 23 lbs.

No. 76—Complete as listed.....Each, $6.20

The extra 5-prong attachment shown can be furnished either with the Rival Plow at an extra cost, or separately for use with other plows of similar type.

Extra 5-Prong Attachment.....Each, $1.40

Repairs for Rival Plow

No. 101—Handles with Bolts and Braces	Per pair,	$3.00
No. 102—Shovels	Each,	$0.50
No. 103—Calf Tongues	Each,	$0.40
No. 104—Moldboard	Each,	$0.80
No. 109—Weeder and Rake combined	Each,	$1.30
No. 107—Wheel	Each,	$2.50
No. 108—Round for Handles	Each,	$0.20

Clipper Garden Plows

This plow is built on the same principle as the Rival, but is made entirely of steel. It is adjustable both as to height of handles and angle at which the tools enter the ground. It is built very substantial and will give long service. The tools as illustrated are high grade and will take care of practically every requirement of the average gardener. Handles are painted red, main frame green and wheel black. Weight each, 27 lbs.

No. 521—Complete as shown....Each, $6.50

No. 5 Standard Spring Frame Cultivators

This double-wheel hoe comes nearer doing hand hoe work than any wheel hoe ever made. The arch is made in two pieces, connected at the top by one bolt, which allows the wheels to be set from 12 to 15 inches apart. The handles are bolted to the spring steel beams, permitting the attachments to be moved to and from one another very easily. This is an important feature for it enables the operator to cultivate between hills in a row. Handles and all attachments adjustable. Wheels 16 inches in diameter with 1⅛-inch tire. Weight each, 26 lbs.

No. 5—Complete as shown.....$12.20

No. 20 Standard Garden Plows

One of the very best all purpose garden plows on the market. It has a very strong single wheel 24 inches in diameter, with 1⅛-inch tire. The adjustment is simple and perfect. Plow is adjusted up or down by loosening a thumb nut. Handles adjusted up or down without disturbing the plow. Equipped with double end shovel, moldboard with landside, weeder and rake. These tools are made from hard steel, oil tempered, ground and polished. Steel shank is shaped so it can be raised or lowered for deep or shallow cultivating without changing slant of tools in the ground. Weight each, 19 lbs.

No. 20—Complete as shown.....Each, **$6.70**

No. 1 Midget Seeder

For Use With Practically Any Make of Single Wheel Cultivator.

Will attach to No. 20 "Standard" single wheel cultivator, or to almost any make of single wheel cultivators having 5½ inches or more space between the shank and wheel.

Will drill almost any kind of garden seed from the smallest up to peas and beans.

While the hopper holds one pint, it will handle and drill out clean a 5c package of seed just as well as a larger amount.

The shoe is adjustable for any depth desired and the coverer swings so that small clods or a little trash does not interfere with its work.

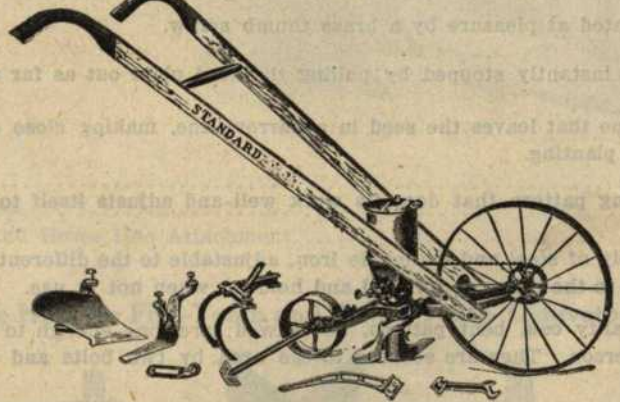
For use in close quarters, in beds or against a fence, or where it is not convenient to use the seeder attached to a cultivator frame; a short wood handle can be fitted to the seeder and used in this manner.

Packed 1 in a carton, 6 in a crate. Weight each, 6 lbs.

No. 1—Midget Seeder.....Each, **$ 6.20**

No. 201—Including No. 1 Seeder Attachment with No. 20 Plow as shown above, complete.....Each, **$12.50**

No. 12 Standard Hill and Drill Seeders



A combined single wheel hill and drill seeder, cultivator, plow and hoe.

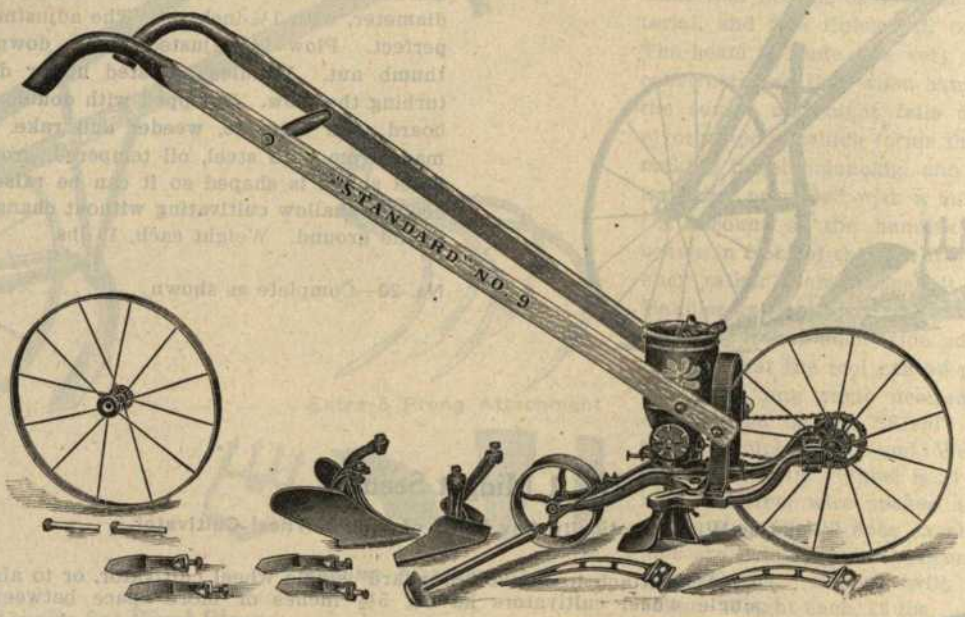
This is a strictly first-class combination in all its operations, being equipped with a variety of cultivating attachments that are of the proper size, shape and quality to adapt them best to the work they perform. The Hill and Drill Seeder Attachment is very simple in construction and operation and is durable. It is practically the same as No. 9 except is a single wheel tool. It is provided with a double agitator rotary force feed and will positively not injure any delicate seed in planting. Wheel is 16 inches in diameter, with tire 1½ inches wide.

This is a very neat and attractive seeder and has every advantage of and less parts than any other similar seeder made. Weight, 45 lbs.

No. 12—Complete as shown.....**$21.80**

No. 9 Standard Hill and Drill Seeder

Combined Hill and Drill Seeder, Double and Single Wheel Cultivator, Plow and Hoe



This is one of the best combination tools ever offered. Easily changed from a double to a single wheel cultivator **and with the hill and drill seeder attachment, makes three complete tools in one.**

The tool is light and strong, with few parts to get out of order, and has a positive rotary force feed.

The Hill Spacer is the simplest known, being of only one piece. It will not only deliver seed in drills but can be quickly set to drop in hills 6, 8, 12 and 24 inches apart; it may be set for two different distances without entirely re**moving the nut that secures it in place, or by removing and reversing the other two distances are obtained.**

The agitator in the shaft that runs through the hopper stirs the seed gradually and keeps a supply of seed constantly fed to the revolving brush wheel, which also gently but positively feeds the seed through the opening in the bottom of hopper. This is what is termed a double agitator feed. It is not injurious to seed, but sure to feed. The revolving brush is entirely cased over, which protects the bristles and reduces any unnecessary wear on them, and leaves only a small amount of work for them to perform.

The index is at the rear of the hopper base, in plain sight, easily understood, with very plain letters that are easily read at a distance.

The seed opening is regulated at pleasure by a brass thumb screw.

The flow of seed may be instantly stopped by pulling the seed plate out as far as it will come where it will latch.

The shoe is of special shape that leaves the seed in a narrow line, making close cultivation possible. This shoe is adjustable for deep or shallow planting.

The coverer is the swinging pattern that does its work well and adjusts itself to the inequalities of the ground.

The marker is made entirely of steel and malleable iron, adjustable to the different widths of rows by a thumb screw; is easily turned from one side to the other or forward and held up when not in use.

The handles are extra quality oak, bent pattern, not sawed; are long enough to insure easy draft and are adjustable to suit the height of any person. They are secured to the arch by two bolts and malleable plates that prevent the handles from splitting.

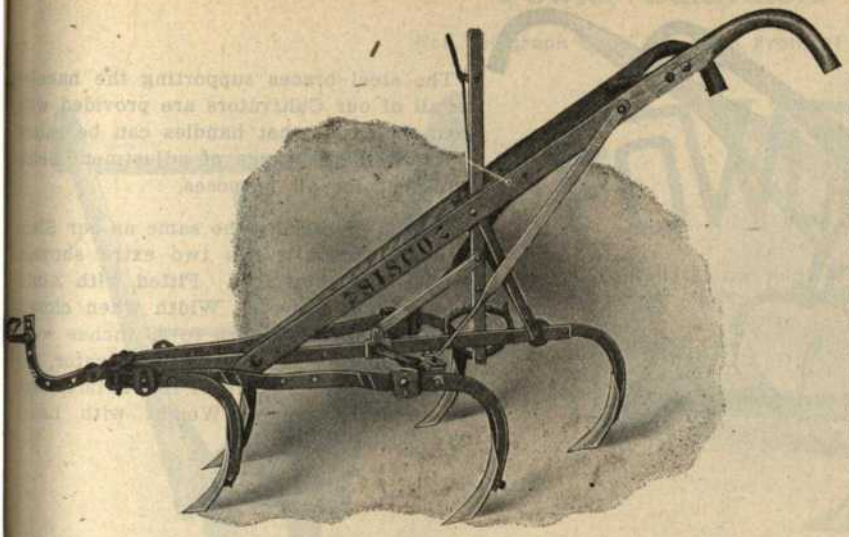
The wheels are the wire pattern, strong, light and are 16 inches in diameter with 1⅛-inch rim. Seeder is driven with steel chain, which has plenty of adjustment.

This seeder will handle practically any kind of garden seed from the size of celery to peas and beans and will distribute the seed evenly in either hills or in drilled rows.

The attachments are 4 cultivating teeth, 1 pair 6-inch hoes, 1 pair vine guards, 1 pair plows, 1 wrench and 1 hill and drill seeder complete as shown. Weight each, 56 lbs.

No. 9—Complete as shown.....$25.20

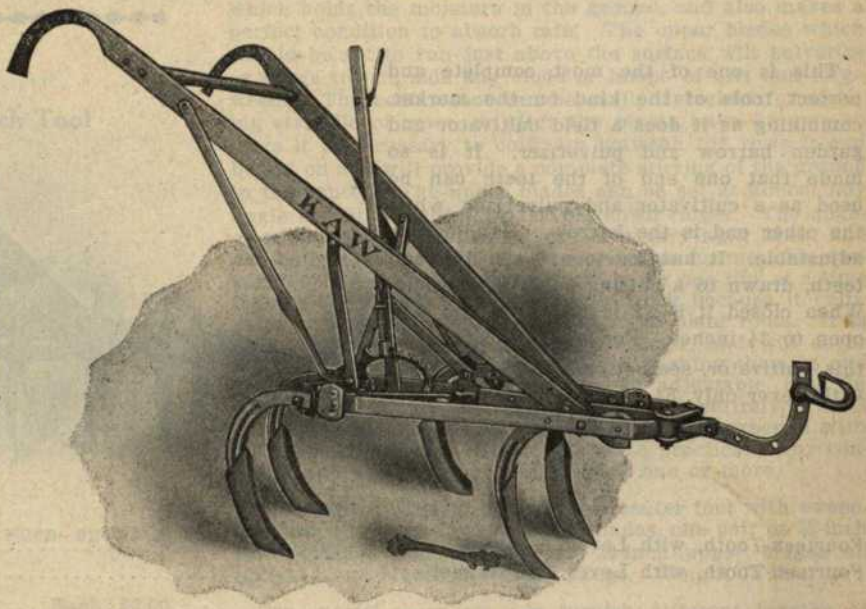
Sisco Five-Tooth Cultivator



A high-class all-steel frame tool. Our standard of "Sisco" quality has been maintained in this cultivator for many years, and we guarantee it now, as in the past, as one on which we have no competition. It has an expansion of 29 inches or will close to 10 inches. Handles are adjustable. The **shovel shanks are bolted to the outside of beam, thus throwing the face of the shovels square to the work when adjusted to regular width. The shovel shanks are adjustable to many different angles. Provided with 3-inch double-point blades. Iron parts painted green. Handles varnished,** but with red grips. For wheel to attach to this cultivator, see next page. Weight with Lever only, 54 lbs.

Sisco, 5-tooth, with Lever. ..... Each, **$12.50**
Sisco, 5-tooth, with Lever and Wheel. ..... Each, **$14.20**
Sisco, 5-tooth, with Lever, Wheel and Horse Hoe Attachment ..... Each, **$17.20**

Kaw Five-Tooth Cultivator



A well made all-steel frame tool, perfect in construction; will expand to 28 inches. Width when closed, 10 inches.

Shanks are adjustable same as the Sisco Cultivator above. Shovels are 3-inch double point. Handles are adjustable. Iron parts painted green. Handles varnished, with red grips. For wheel to attach to this cultivator, see next page. Weight with Lever only, 50 lbs.

Kaw, 5-tooth, with Lever. ..... Each, **$11.60**
Kaw, 5-tooth, with Lever and Wheel. ..... Each, **$13.30**
Kaw, 5-tooth, with Lever, Wheel and Horse Hoe Attachment ..... Each, **$16.30**

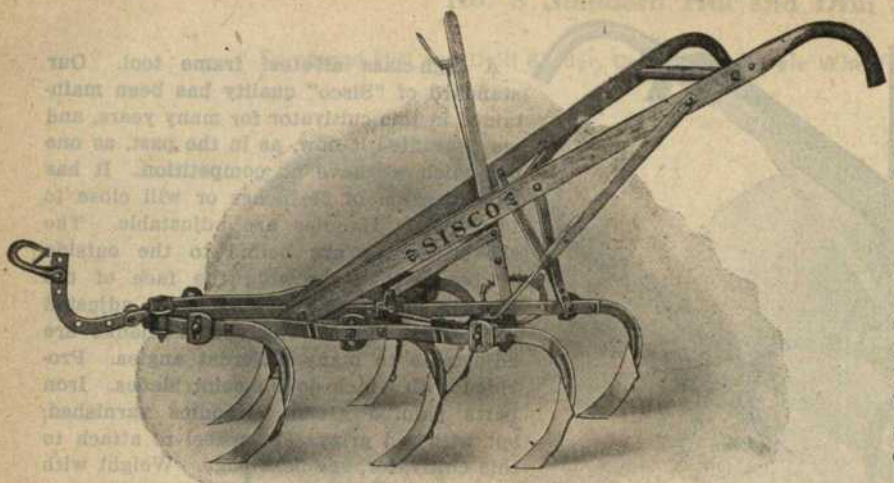
Horse Hoes for Five-Tooth and Seven-Tooth Cultivators

Crucible Steel, Polished and Blued.

Furnished in complete sets or center blades separately if desired. Weight per set, 7 lbs. We can also furnish sweeps to fit these cultivators.

For price refer to page 668.

Sisco Seven-Tooth Cultivator



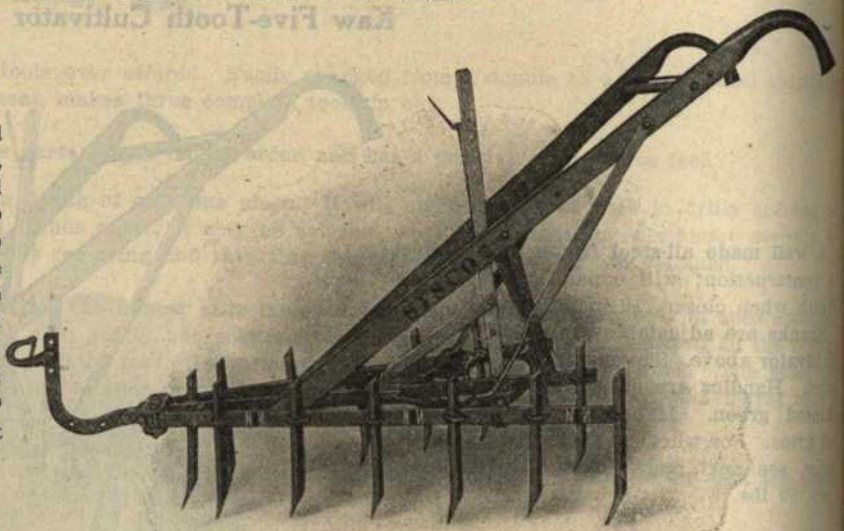
The steel braces supporting the handles on all of our Cultivators are provided with extra holes, so that handles can be raised or lowered, the range of adjustment being sufficient for all purposes.

This is practically the same as our Sisco 5-Tooth, except it has two extra shovels. Shanks are adjustable. Fitted with 3-inch double point shovels. Width when closed, 10 inches and will open to 29 inches wide. For wheel to attach to this cultivator, see bottom of page. For Horse Hoe Attachment, see preceding page. Weight with Lever only, 58 lbs.

Sisco, 7-tooth, with Lever $14.50
Sisco, 7-tooth, with Lever and Wheel $16.20
Sisco, 7-tooth, with Lever, Horse Hoe Attachment and Wheel $19.20

Sisco Fourteen-Tooth Cultivator or Harrow

This is one of the most complete and perfect tools of the kind on the market, combining as it does a field cultivator and garden harrow and pulverizer. It is so made that one end of the teeth can be used as a cultivator and pulverizer, while the other end is the harrow. Handles are adjustable. It has fourteen ⅝x⅞ diamond teeth, drawn to a cutting edge on one end. When closed it is 12 inches wide and will open to 34 inches. For wheel to attach to this Cultivator, see bottom of page. Weight with Lever only, 54 lbs.



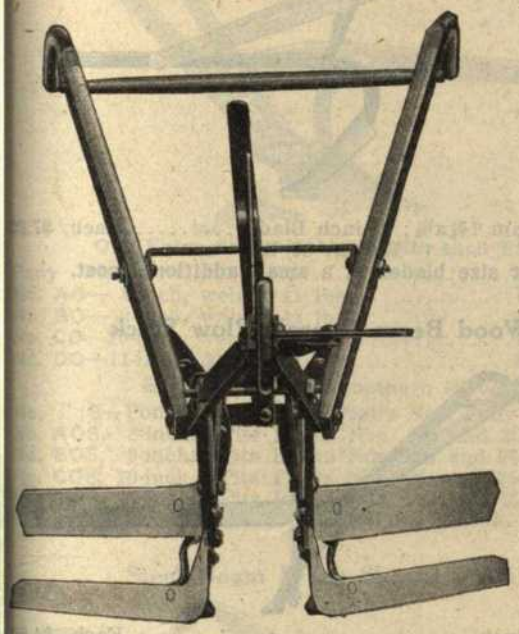
Fourteen-Tooth, with Lever $12.50
Fourteen-Tooth, with Lever and Wheel $14.20

Cultivator Wheel

7½ inches in diameter, with 2-inch face. For use with Five, Seven and Fourteen Tooth Cultivators, strong and substantial. Weight each, 6 lbs.
Cultivator wheel, complete, as shown . . . . . Each, $1.70

Fowler Cultivators

For Telegraph Code See Page Front of Index.



FOWLER

Eliminates the Fear of Drought.
Easy to Handle.

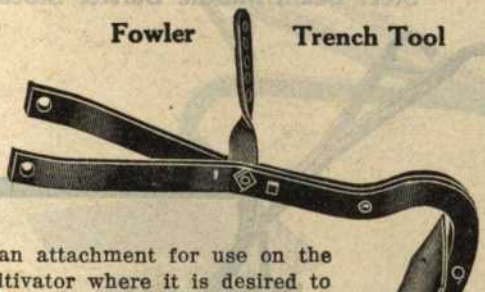
This is one of the most practical Cultivators ever placed on the market. It is based on the principle of Surface Cultivation which has been recognized by the government to be the most satisfactory method. The illustration at the left shows the Fowler with both upper and lower blades, which are regularly furnished. The lower blades run beneath the surface of the ground cutting off all weeds and grass and loosens top soil so it becomes a dust mulch which holds the moisture in the ground, and also makes a perfect condition to absorb rain. The upper blades which should be set to run just above the surface will pulverize or shove to one side any clods or lumps of dirt and large weeds. The center foot can be easily detached for working straddle of rows, or after the plants have become so large it is necessary to cultivate between the rows it can be put on and will provide a complete stirring of the ground in the center. The upper blades can be set at almost any angle for either hilling or tearing down ridges. The angle at which the blades are set makes a very light draft, and can be handled easily by one horse. This means a big saving, for most cultivators which will cover one row at a time require two horses. It does better work because it cultivates shallow and does not destroy the plant roots. It is also very successful as a bean harvester, and will cover two rows at a time, the upper blades pushing them to one side into a windrow. This tool is adjustable both in width and depth of cultivation. It is made entirely of steel except the handles. The blades are easily sharpened with a file or grindstone. It is adaptable to practically any condition and every farmer should have one or more.

This outfit regularly includes the center foot with sweep, one pair of 20-inch lower cutting blades, one pair of 32-inch lower blades and one pair of 24-inch upper blades all polished and blued, and depth gauge. Weight 75 lbs.

For special work we can furnish different lengths of blades. If interested ask for full information.

Fowler Cultivator complete as described.....Each, $24.00

Fowler Trench Tool



This is an attachment for use on the Fowler Cultivator where it is desired to leave a trench for irrigation. It is attached in the center and is adjustable up and down to regulate the depth of the trench. It is fitted with a double pointed shovel 3½x8½ inches.

This Trench Tool is only furnished when specially ordered and at an extra price as shown.

Fowler Trench Tool.....Each, $2.00

Fowler Gauge Wheel

This is an attachment which works in connection with the depth regulator to keep the Fowler from running too deep in very light sandy soil.

Fowler Gauge Wheel.....Each, $2.20

Repairs for Fowler Cultivators

20-inch Blades	Per pair, 1.50
24-inch Blades	Per pair, 1.75
28-inch Blades	Per pair, 2.00
32-inch Blades	Per pair, 2.30
36-inch Blades	Per pair, 2.60
40-inch Blades	Per pair, 3.00
Extra Point or Sweep	.50
Depth Gauge, complete	1.80
Lever, with Braces Attached	2.10
Handles, per pair, without cross brace	1.60
Cross Brace for Handles	.25
Foot, without Bolts	.70
Side Clevis	.30
End Clevis	.30
Clamps for Upper Blade	Per piece. .10

Malta Steel Beam Double Shovel Plow

No. 1—With 1¾x¾ Beam, 6 -inch Shovels...Each, $9.50
No. 3—With 1½x⅝ Beam, 5½-inch Shovels...Each, $7.50
Weight No. 1, 37 lbs.; No. 3, 35 lbs.

Malta Wood Beam Double Shovel Plow

No. 33—6-inch Shovels.....Each, $10.00
Weight 24 lbs.

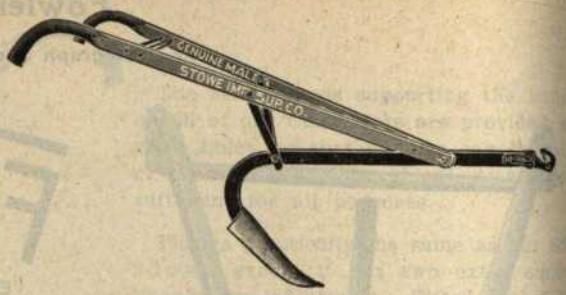
Champion Double Shovel Plow

Wood Beam and Steel Standards. 6-inch Shovels.
No. 180—With 1⅝x⅝ Steel Shanks.....Each, $8.00
Weight 46 lbs.

Malta Wood-Beam Single-Shovel Plow

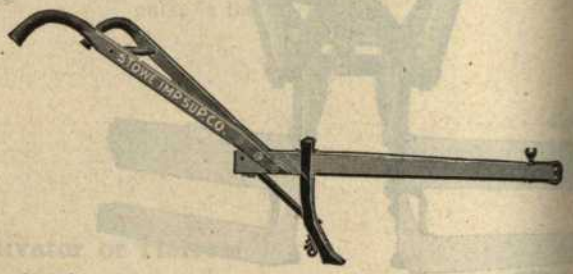
No. 34—11-inch Blade.....Each, $7.50
Weight 23½ lbs.
Other size blades at a small additional cost.

Malta Steel-Beam Single-Shovel Plow



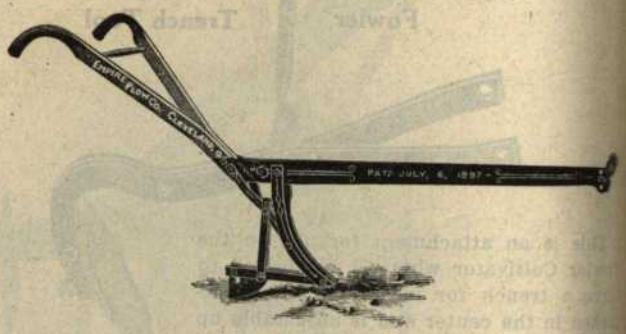
No. 12—Beam 1¾x¾; 11-inch Blade.....Each, $7.20
Weight 33 lbs.
Other size blades at a small additional cost.

Wood Beam Georgia Plow Stock



No. 48—48-inch.....Each, $4.50
No. 54—54-inch.....Each, $5.10
Extra Complete Handles.....Per jair, $1.70
Weight No. 48, 20 lbs.; No. 54, 33 lbs.

Steel Beam Middle Burster Stock



With Adjustable Landside and Rudder.

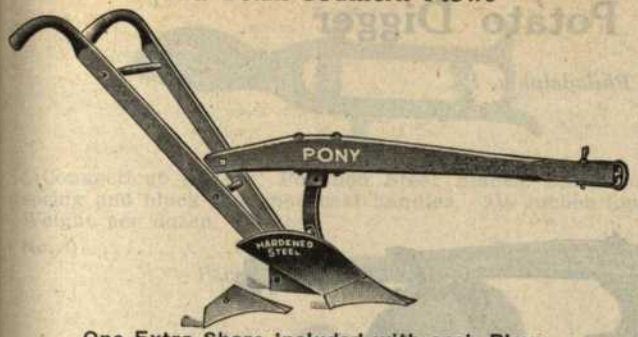
This Plow Stock has an extra long and very strong beam and heavy foot. The construction of the Steel Beam as a U Bar makes it the best and strongest Plow Stock on the market. Beam 53 inches long.

No. 3.....Each, $11.50
Weight 32 lbs.

Lone Star Middle Burster Stock

Very strong and has good Rudder.
Wood Beam 56 inches long.
No. 200.....Each, $9.50
Weight 34 lbs.

Wood Beam Southern Plows



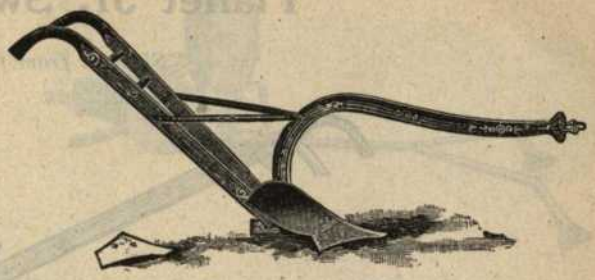
One Extra Share included with each Plow.

Pony—7-inch, weight 38 lbs.....Each, $ 9.30
No. AO— 8-inch, weight 41 lbs.....Each, $10.50
No. BO— 9-inch, weight 42 lbs.....Each, $12.60
No. CO—10-inch, weight 55 lbs.....Each, $17.00
No. DO—11-inch, weight 57 lbs.....Each, $19.50

Extra Shares for Southern Plows.

No. S—Pony, 7-inch. Fits Plows Nos. Pony and 252.
No. AOS, 8-inch. Fits Plows Nos. AO and 253.
No. BOS, 9-inch. Fits Plows Nos. BO and 254.
No. COS, 10-inch. Fits Plows Nos. CO and 255.
No. DOS, 11-inch. Fits Plows Nos. DO and 256.
For prices see Plow Shares, pages 660-664.

Steel Beam Southern Plows



One Extra Share included with each Plow.

No. 252—Steel Plow, 7-inch, weight 60 lbs.....$12.50
No. 253—Steel Plow, 8-inch, weight 63 lbs.....$13.90
No. 254—Steel Plow, 9-inch, weight 68 lbs.....$15.50
No. 255—Steel Plow, 10-inch, weight 84 lbs.....$19.90
No. 256—Steel Plow, 11-inch, weight 87 lbs.....$21.70

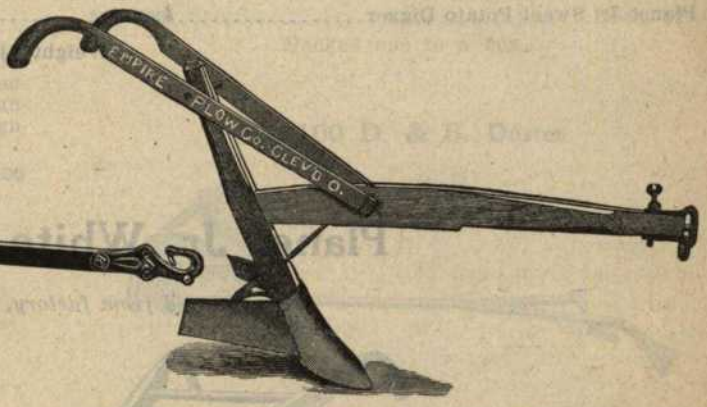
We can also furnish extra Wood Plow Beams and Handles. See Index.

Steel Beam Wing Shovel Plow

Beam is made of ¾x1¾-in. steel. Used for same purposes as wood beam. It has the advantage of being stronger. Another advantage is that blade can be lowered as it wears. Weight, 39 lbs.

No. 493.....Each, $9.80

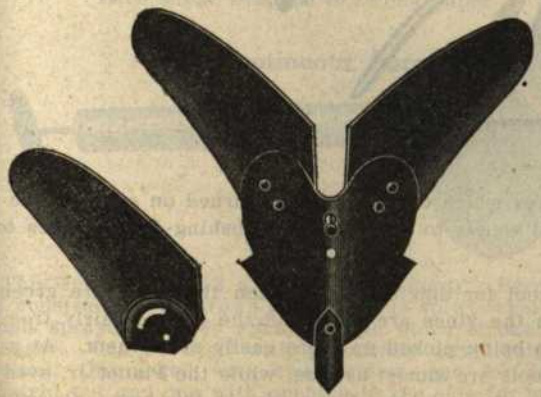
Wood Beam Wing Shovel Plow



A single shovel plow with adjustable steel wings which can be let out to any desired angle by means of punched spread rods. For hilling, as well as digging potatoes this plow will be found an excellent tool. It can be worked with one wing if desired, or with both wings at different angles. Weight 33 lbs.

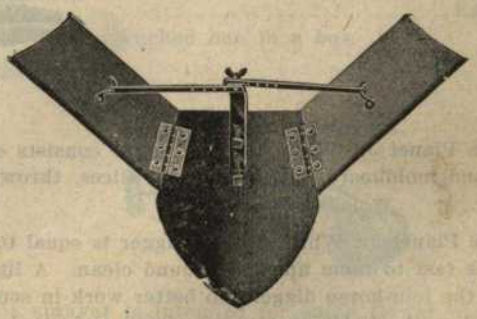
No. 487.....Each, $9.80

Twenty-Inch Furrower



These Furrowers have adjustable wings which can be set to open a wide or narrow furrow or may be removed entirely for lighter work. Attached with two bolts 1½ inches apart center to center. They are for use on cultivators. Ground, polished and blued. Weight, 11 lbs.
For price see page 668.

Wing Shovel Blades

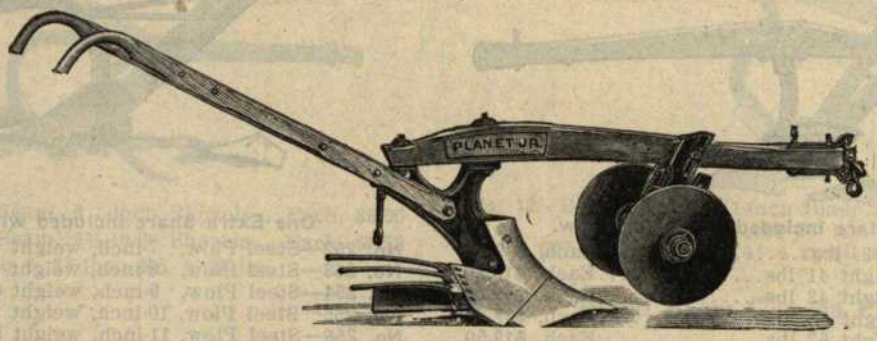


The wings of the above plows are adjustable, as shown above. The straps or braces that support them are punched to allow the blades to be set at any desired angle. Ground, polished and blued. Weight 12 lbs.

Wing Shovel Blades.....$5.00

Planet Jr. Sweet Potato Digger

Shipped from factory, Philadelphia, Pa.



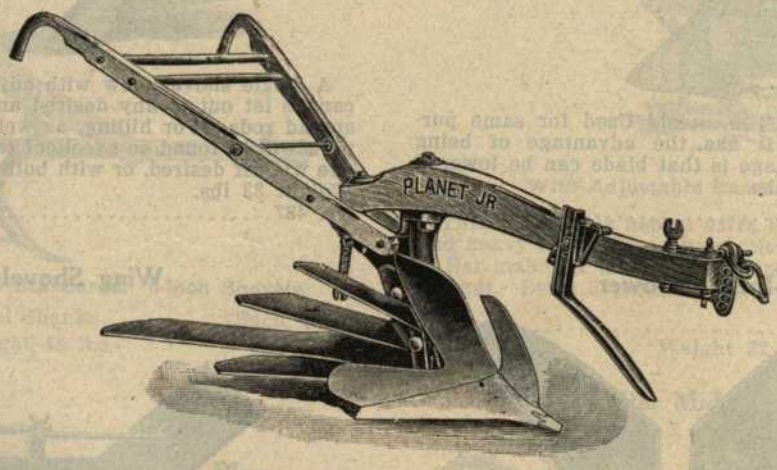
This tool is the recognized standard for sweet potato digging. It has a flat moldboard with steel digging tines. The moldboard is adjustable for digging in different soils and all width rows, and in both hills and drills. The beam is high, giving ample room for the pair of vine cutters, so that a high arch is used. The steel discs can be set 16 or 18 inches apart, and at any depth or angle desired, and each can be adjusted for depth independently of the other. The axles and boxes are made separate from the frame, and when worn can be cheaply and quickly renewed. At a single passage the tool cuts the vines on both sides of the row, plows out the potatoes and leaves the hills on top of the furrow slice, most of the earth being knocked off from them, and the crop left in the best condition for the further work of gathering into heaps. Weight each 140 lbs.

Planet Jr. Sweet Potato Digger.....Each, 47.50

Weight 140 lbs.

Planet Jr. White Potato Digger

Shipped from factory, Philadelphia, Pa.

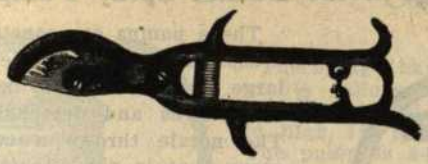


The Planet Jr. White Potato Digger consists of successive shares which cut the furrow, turned on edge by the front share and moldboard, into horizontal slices, throwing the vines and weeds to one side and pushing the potatoes to the surface.

The Planet Jr. White Potato Digger is equal to any four-horse tool for digging early, when the vines are green, the potatoes fast to them and the ground clean. A little later on when the vines are dead and the ground fairly free from weeds, the four-horse diggers do better work in some cases, the crop being picked up more easily after them. At a later stage when the fields grow very grassy and weedy, the four-horse tools are almost useless, while the Planet Jr. even then does its work well. If compelled to use but one digger the season through, the Planet Jr. is the best. It costs but one-fourth or fifth as much, takes less than half the power to draw it, does not skin the potatoes, digs faster and costs about one-twentieth as much for repairs, and it will lost almost a lifetime, with a few new shares and landsides. Weight each 126 lbs.

Planet Jr. White Potato Digger.....Each, 47.50

Pruning Shears



Connecticut pattern, Polished Steel Blades, brass coil spring and black japanned cast handles. 9½ inches long. Weight per dozen, 9½ lbs.

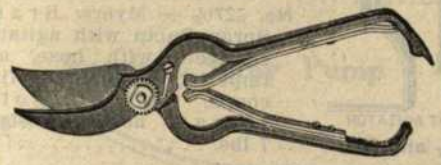
No. 0.....Per doz., $9.60

Packed ½ dozen in a box.

California pattern. A most extensively used style. Crucible steel blades, tempered and polished. Volute spring, black lacquered malleable iron handles. 9 inches long. Weight per dozen, 11 lbs.

No. 4665.....Per doz.. $16.80

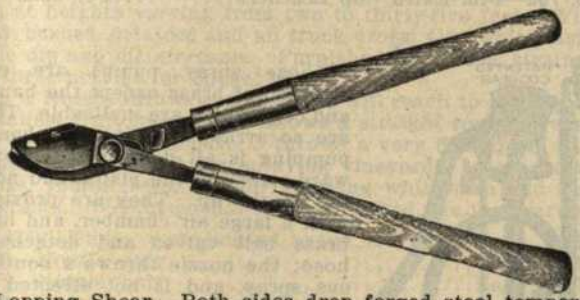
Packed ½ dozen in a box.



American pattern. A fine highly finished shear and very serviceable. Crucible steel blades, carefully tempered, oval bevel, and ratchet lock nut. Malleable handles and double flat bronze springs. Full polished throughout. 9 inches long. Weight per dozen, 13 lbs.

No. 4773.....Per doz., $48.00

Packed ½ dozen in a box.

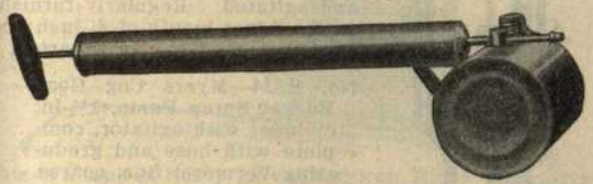


Lopping Shear. Both sides drop forged steel tempered. Ferrules reinforced. Carefully put together and equipped with lock nut. An excellent tool. 26 inches long. Weight each, 3 lbs.

No. 2026.....Each, $4.40

Each shear wrapped in strong paper.

Acme Continuous Sprayer



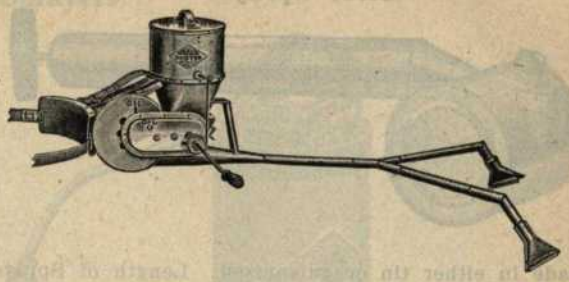
This sprayer throws a fine, narrow spray. Because of its construction it throws a continuous spray where most small sprayers simply spray on the down stroke of the plunger. Can be used with practically any liquid disinfectant. Furnished with two nozzles, one for spraying straight out and one with opening in the side for spraying under side of plant leaves, etc.

Length of sprayer 20 inches. Made of high-grade tin and holds one quart. Weight per dozen, 18 lbs.

No. 718.....Per doz., $14.40

Packed one dozen in a carton.

No. 200 D. & B. Duster



For dusting all vegetable and fruit crops as well as cotton, tobacco, etc. Can be used effectively with any kind of dusting material, whether it be heavy, light, sticky, or in lumps. Patented agitators and feeding device prevent hanging up of powder in hopper. Powerful air blast breaks up the powder into fine dust and prevents clogging of outlet. Uniform flow of powder always assured. Constructed of heavy lead coated steel and is painted aluminum color. Has round hopper 7½ inches diameter with tapered bottom. Large cover with special fasteners makes it easy to fill in the powder. Curved adjustable body support fits the operator. Capacity of hopper, 5 to 10 lbs., depending on powder used. Equipment includes four 15-inch Pipes, one Branch Connection, two Elbows and two Nozzles. Weight, 22 lbs.

No. 200.....Each. $21.40

Packed one in a box.

No. 100 D. & B. Duster

Practically the same as No. 200 except has smaller capacity. Adjustable to difference in width between wide and narrow rows. Agitator is attached to crank shaft and has a rotary action and powder is, therefore, distributed evenly and not in puffs. Powder receptacle, fan box and fittings are made of enameled heavy tin plate. Powder controlling valve and hopper bottom are made of brass. Capacity 2 to 5 lbs, depending on powder used. Equipment consists of four 15-inch Pipes, one Branch Connection, two Elbows and two Nozzles. Weight 14½ lbs.

No. 100.....Each. $16.50

Packed one in a box.

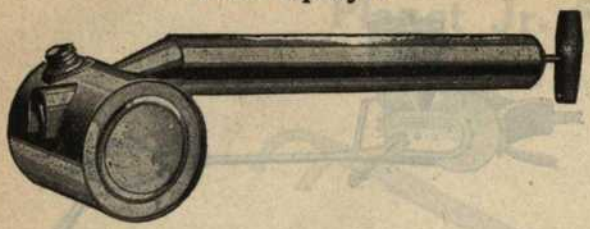
Midget Tin Sprayers

This sprayer is intended for small flower or vegetable gardens where only limited spraying is to be done. Holds ½ pint. Length over all 15½ inches. Weight per dozen, 9 lbs.

No. 1076.....Per doz., $5.00

Packed one dozen in a carton.

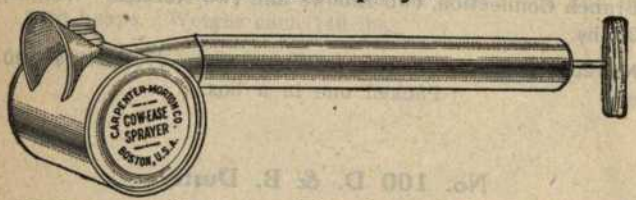
Sisco Sprayer



Made in either tin or galvanized. Length of Sprayer, 23 inches. Capacity of tank, one quart. Throws a spray as fine as mist. The point of the air chamber being made to taper gives great force to the spray. The tank and air chamber are fastened together very rigidly and will not spring out of shape. Piston rod is spring steel and cup leather plunger. Will handle any kind of a liquid spray or disinfectant. Packed one dozen in a carton. Weight per dozen, 16 lbs.

No. 1—Sisco, all tin. . . . . Per doz., $7.00
No. 4—Sisco, galvanized can, tin tube. . . . . Per doz., $9.50

Cow-Ease Sprayer



Made especially for applying the well known disinfectant, "Cow-ease," but is also suitable for applying all kinds of liquid preparations to either plants, trees or animals. It is made from charcoal tin plate, seams doubled, and well soldered. The plunger rod is extra heavy, with anhydrous leather backed by an iron shoulder. The air chamber is 19 inches long, 1¾ inches in diameter; length of Sprayer is 23 inches; capacity of tank, one quart. Packed one dozen in a carton. Weight per dozen, 15 lbs.

No. 81. . . . . Per dozen, $9.50

Myers Peerless Bucket Pump

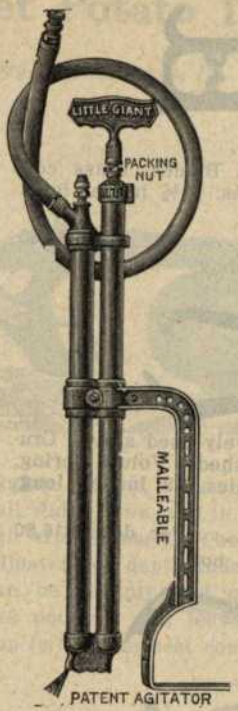
This pump is constructed entirely of brass, except the foot piece and handle which are malleable. It is provided with a large air chamber and has brass ball valves and 3-foot detachable hose. It is double acting, throwing a continuous spray.

Will throw a solid stream or spray. Has a jet agitator on the bottom for keeping the solution thoroughly mixed and agitated. Equipped with 3 feet ⅜-inch spray hose, attached with clamps.

Packed one in a carton.

No. 323—Weight 6 lbs. . . . . Each, 4.25

Myers Brass Bucket Spray Pumps



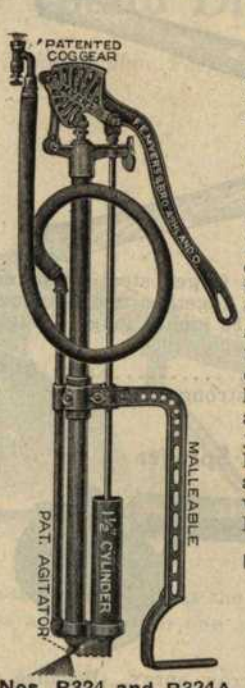
Nos. 327½ and 328.

These pumps are constructed of brass. They are provided with a large air chamber and have brass ball valves and detachable hose. The nozzle throws a continuous spray that is not affected by the movement of the plunger. Carries a pressure of 50 to 100 lbs. on the nozzle with ordinary exertion. Throws a solid stream 50 feet—especially adapted for spraying trees, sprinkling lawns, washing windows, etc. When spraying, a fine jet is discharged in the bottom of bucket which keeps the solution thoroughly mixed and agitated. Pumps are also provided with a sprinkler for flowers. Regularly furnished with a 3-ft. length of ⅜-inch hose. Pumps packed one in a carton.

No. 327½ — Myers Brass Spray Pump with agitator, complete with hose, and Imperial combination fine, coarse spray and solid stream nozzle. Weight, 7 lbs. 4.50

No. 328 —Myers Brass Spray Pump, with agitator, complete with hose. Imperial combination fine, coarse spray and solid stream nozzle, and an 8-foot pipe extension. Weight, 10 lbs. 5.80

For Vermorel or Bordeaux Nozzle on either of the above pumps. . . . . Add .60
No. 702—1-in. Extra Cup Leathers. . . . Per doz., .60



Nos. R324 and R324A.

These spray pumps are constructed of brass except the handle and cogs which are malleable. They are so arranged that the labor of pumping is all done on the downward stroke of the piston and nothing on the up. They are provided with a large air chamber, and have brass ball valves and detachable hose; the nozzle throws a continuous spray, and is not affected by the movement of the plunger. Will throw a solid stream 50 feet, and are of unusual value for spraying trees, washing windows and cars, extinguishing fires, sprinkling lawns, flowers, etc. For spraying are arranged to discharge a fine jet in the bottom of the bucket to keep the solution thoroughly mixed and agitated. Regularly furnished with a 3-foot length of ⅜-inch hose. Pumps packed one in a carton.

No. R324—Myers Cog Gear Bucket Spray Pump, 1½-in. cylinder with agitator, complete with hose and graduating Vermorel fine, coarse spray and solid stream nozzle. Weight, 7 lbs. 7.00

No. R324A—Myers Cog Gear Bucket Spray Pump, 1½-inch cylinder with agitator, complete with hose, graduated Vermorel fine, coarse spray and solid stream nozzle, and an 8-foot extension pipe. Weight, 10 lbs. 7.80

No. 702—1½-in. Extra Cup Leathers. . . . . Per doz., 1.00

For extra hose to be used with the above sprayers, see Index.

Compressed Air Sprayers

This sprayer has capacity of 3½ gallons. Made of heavy galvanized iron. 19½ in. high, 7⅜ in. diameter. The pump is 2-in. heavy brass tubing with specially treated leather on steel plunger rod. The pump is set in the tank in such a way that a very simple turn of the handle will detach the pump from the tank or the plunger from the pump. Nozzle is of the automatic shut-off type, made of solid brass and equipped with a strainer. Equipped with a very high grade ⅜-in. hose. Furnished complete with shoulder strap. Weight each, 9¾ lbs.

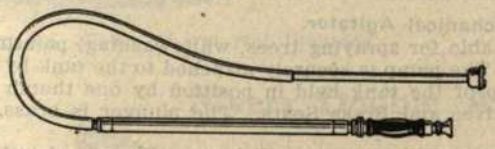
Packed one in a carton.

No. 715.....Each, $9.50

1½-Gallon capacity. Works with compressed air. Made to give good service under hard usage. Has been tested to 225 lbs. pressure. Produces fine misty spray, like fog. Equipped with brass angle extension tube in place of hose. Automatic control brass nozzle. Seamless brass pump. Galvanized steel tank 6¼x13 in. (riveted seam). Height over all, 17 ins. Weight, 4¾ lbs. Packed one in a carton.

No. 25.....Each, $6.40

Standard Spray Pump



A very simple and powerful direct-acting Force Pump. Made entirely of brass and is warranted for five years.

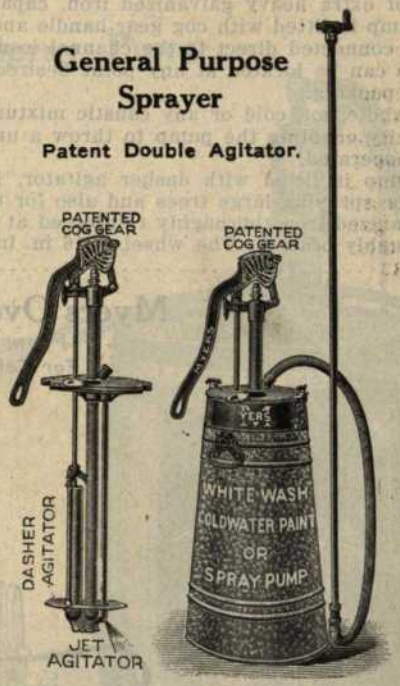
It will spray the tallest fruit trees from the ground and the nozzles will produce a mist-like spray in the tree, at heights varying from two to thirty-five feet. Will spray bushes, potatoes and all truck crops, also whitewash, cattle dip and disinfectants. Furnished with hose, strainer and three nozzles for bucket use.

No. 1 Nozzle throws a spray that will reach to the top of the tallest fruit tree; No. 2 throws a straight round stream fifty to sixty feet, and No. 3 throws a very fine spray and is especially adapted for spraying vineyards, truck crops, bushes, young trees, and for spraying whitewash and disinfectants. Weight each, 3½ lbs. Packed one in a carton.

No. 1763—Pump, complete as above.....Each, $7.50
No. 1—Nozzle only.....Each, $0.30
No. 2—Nozzle only.....Each, $0.30
No. 3—Nozzle only.....Each, $0.60
No. 4—Extra Strainers for end of hose.....Each, $0.90

General Purpose Sprayer

Patent Double Agitator.



This represents the Myers Whitewash Cold Water Painting Machine and General Purpose Sprayer, with patent Double Agitator; a most complete and serviceable outfit. The tank is made of heavy galvanized iron with a wide bottom so as to set steady in operation. The cover is removable, is held securely in place by two thumb nuts, one on each side, which holds the cover tight and prevents any spilling or spashing of the liquid. Holds 7 gallons.

The pump is practically the same as No. R324 Cog Gear Bucket Spray Pump, as shown on previous page, fitted with Bordeaux Nozzle. Brass Ball Valves, and has both jet and dasher agitator.

This is one of the best Sprayers for all around use on the market. Will handle any kind of liquid disinfectants. Regularly furnished with 3 ft. ½-inch hose and one 4-ft. extension pipe.

No. R329.....Each, 13.50

Shipping weight 25 lbs.

Attachments for Standard Spray Pumps

This is a tank of heavy galvanized iron, fitted with carrying straps, and has a brass strainer in the filler cap ready for attaching to the Standard Spray Pump. Has capacity of five gallons. Price includes only the attachment. Packed one in a carton.

No. 1764—Galvanized Knapsack Attachment...Each, $5.50

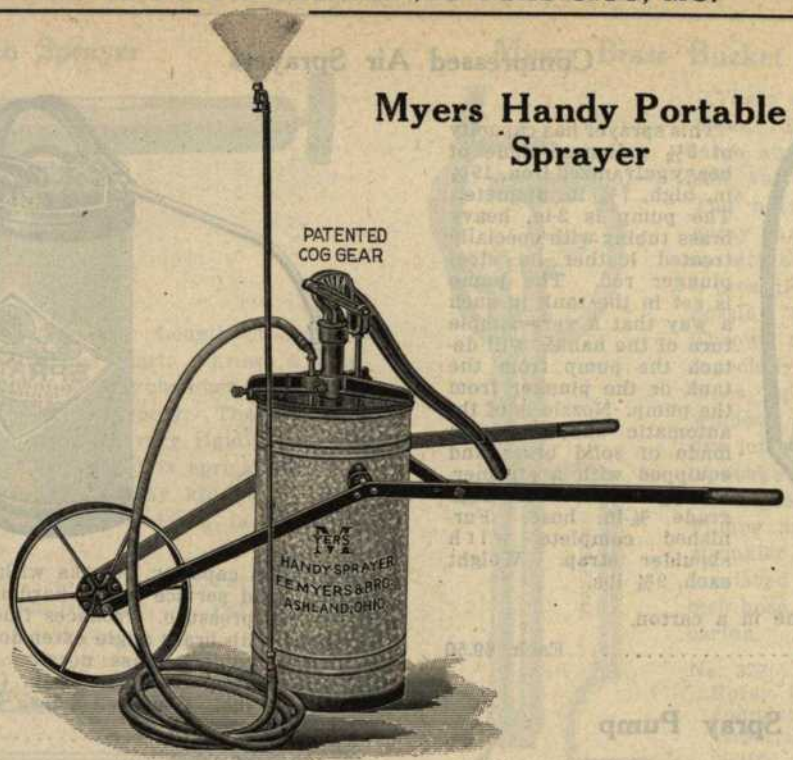
Potato Attachment.

The potato attachment is a short brass extension 19 inches in length and with a curved end for spraying potatoes and other low-growing crops.

Potato Attachment.....Each, $1.20

For extra hose to be used with the above sprayers, see Index.

Myers Handy Portable Sprayer



With Cog Gear Spray Pump and Mechanical Agitator.

Made of extra heavy galvanized iron, capacity 12½ gallons. Suitable for spraying trees, whitewashing, painting, etc. The pump is fitted with cog gear handle and mechanical agitator. The pump is securely attached to the tank by means of a clamp connected direct to the channel iron that surrounds the top of the tank held in position by one thumb screw. The handle can be located at any point desired. Has Bronze Ball Valves and Brass Seats. The plunger is brass, fitted with hemp packing.

Will handle hot, cold or any caustic mixture. The cylinder and discharge pipes are all brass. The air chamber has large capacity enabling the pump to throw a uniform, constant and elastic spray. It has good leverage, is very powerful and easily operated.

The pump is fitted with dasher agitator, 15 ft. of ½-inch hose and an 8-ft. pipe extension in two 4-ft. parts, which adapts it for spraying large trees and also for use in whitewashing on the inside of low buildings. The tank is made of heavy galvanized iron thoroughly reinforced at top and bottom by steel bands. The wheel and handles are made of wrought steel thoroughly braced. The wheel is 16 in. in diameter. Shipping weight, 85 lbs.

No. R336B. 27.00

Myers Overhead Sprayer Attachment

From Factory Only, Ashland, Ohio.

For Telegraph Code, see page front of Index.

This is a spraying attachment for barrel spray pumps for covering several rows at a time. Mounted on plank that bolts to bottom of wagon box, and is complete with all hose and nozzles. The adjustable features adapt it to any kind of work or condition—nozzles adjustable in width to suit any width row and are so arranged that they discharge the spray either directly downward on top of the plant or either forward or backward as desired—can be raised or lowered a distance of 20 inches for spraying small or large plants. The boom is adjustable in width from 6 ft. 1 in. narrowest point, to 11 ft. 3 in. widest point, thus adapting itself to any and all conditions. Will pass through a 7 ft. gate. Can be used in connection with any Barrel Spray Pump, but pump is not included except when ordered extra.

No. 6 Myers Hand Overhead 4-Row Adjustable Sprayer, complete with all necessary Hose and Nozzles (Pump and Barrel not included). Weight, 70 lbs. ..... Each, 27.00

No. 7 Myers Hand Overhead 3-Row Adjustable Sprayer, complete with all necessary Hose and Nozzles (Pump and Barrel not included). Weight, 65 lbs. ..... Each, 25.00

Myers Improved Brass Barrel Spray Pump

Cylinder, Valves, Valve Seats and Discharge All Brass.
All Working Parts Submerged In Liquid, Hence No Priming Necessary.

Has Both Jet and Mechanical Agitator.

Showing No. 305B. Barrel Not Included.

Has Bronze Ball Valves and Brass Seats; the plunger is brass, fitted with hemp packing. Will handle hot, cold or any caustic mixture. The cylinder and discharge pipes are all brass. The air chamber has large capacity, enabling the pump to throw a uniform and elastic spray. It has good leverage, is very powerful and easily operated.

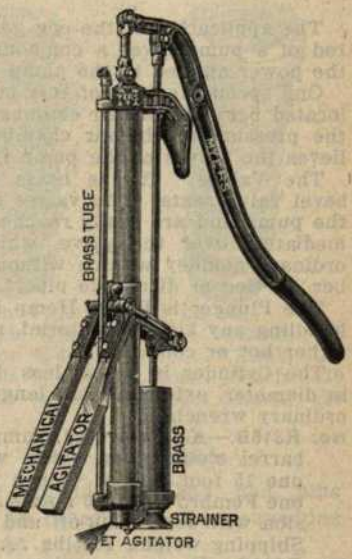
Barrels Not Included in These Prices, and We Cannot Furnish Them.

No. 304. —Myers Improved Brass Barrel Spray Pump, with both jet and mechanical agitators, but without hose or nozzle. Shipping weight, 37 lbs. 11.00

No. 305B. —Myers Improved Brass Barrel Spray Pump complete, with one lead, of 15 feet of ½-inch 5-ply discharge hose, graduating Vermorel nozzle and both jet and mechanical agitators. Shipping weight, 40 lbs. 15.00

Bordeaux instead of Vermorel nozzle furnished without extra charge when specified.

Packed 1 in a bundle.



Showing No. 304.

Myers Double Acting Barrel Spray Pump

Myers Barrel Spray Pumps have Brass Cylinders, Brass Buckets, Brass Valves and Brass Valve Seats.

Has a patent submerged cylinder, is double acting, has patent expansive plunger bucket, large air chamber to cushion the spray, is provided with two discharge ports (one on each side) of which one or both can be used for spraying. The base is properly shaped to fasten on the side or head of barrel, has steel pins, long handle, and is fitted with brass upper and brass lined lower cylinders with ground brass check valve and brass seat. No rubber or leather valves. 1-inch suction pipe and ½-inch hose. It is very powerful and easy to operate; will throw an even, mist-like spray, or a solid stream 60 feet from the point of the nozzle.

Barrels not included in these prices, and We Cannot Furnish Them.

Showing No. 302. Barrel not Included.

Showing No. 302B. Barrel not Included.

No. 300. —Pump only, with strainer and jet agitator. Shipping weight. 25 lbs. 12.00

No. 302. —Complete, consisting of pump, 15 feet of ½-inch 5-ply hose, Vermorel spray nozzle, suction pipe, strainer and jet agitator. Shipping weight, 37 lbs. 18.50

No. 302B.—Complete pump, 15 feet of ½-inch 5-ply hose, Vermorel spray nozzle, suction pipe, strainer and mechanical agitator. Shipping weight. 40 lbs. 20.00

No. 303. —Complete, consisting of pump, suction pipe, strainer and jet agitator, 2 leads of ½-inch 5-ply hose, 15 feet long, and two Vermorel spray nozzles. Shipping weight, 40 lbs. 26.50

No. 303B.—Same as No. 303, except has mechanical agitator. Shipping weight, 35 lbs. 27.50

Bordeaux nozzles, instead of Vermorel, furnished at the same price, if specified.

Packed 1 in a bundle.

For extra hose to be used with the above sprayers, see Index.

Myers Cog Gear Double Action Spray Pump

From Factory, Ashland, Ohio.

For Telegraph Code see page front of Index.

The application of the cog gear movement to the piston rod of a pump gives a compound leverage that increases the power applied to the pump handle over 40 per cent.

One special feature of this pump is that it has a valve located between the air chamber and pump, which retains the pressure of the air chamber on the nozzles and relieves the valves of the pump from all strain.

The Valves: It has brass valves and ground brass bevel valve seats. The valves are located on the side of the pump and are easily reached by removing the nut immediately over the valve, which can be done with an ordinary monkey wrench without disturbing the air chamber, suction or discharge pipe.

The Plunger is Brass, Hemp Packed, which adapts it to handling any kind of material, no matter how caustic and either hot or cold.

The Cylinder is a seamless drawn brass tube 2 inches in diameter, extending full length, removable by using an ordinary wrench.

No. R316B.—As illustrated, pump complete, 50 gallon barrel mounted on skids, with pressure gauge, one 15 foot lead of ⅜-inch 7-ply discharge hose, one Fembro No. 1290 nozzle, one 8-foot pipe extension with lever shut-off and mechanical agitator. Shipping weight, 200 lbs..... 54.00

No. R316C.—Pump complete, 50 gallon barrel mounted on skids, with pressure gauge, two 15 foot leads of ⅜-inch 7-ply discharge hose, two Fembro No. 1290 nozzles, two 8 foot pipe extensions with lever shut-off and mechanical agitator. Shipping weight, 205 lbs..... 60.00

No. R309.—Pump only, with pressure gauge and strainer. Shipping weight, 65 lbs..... 33.00

No. R309A.—Same as R309 except also fitted complete with 6 feet of wire bound suction hose, two 8 foot pipe extensions, and two Fembro No. 1290 nozzles. Shipping weight. 70 lbs..... 41.50

No. R309B.—Pump complete with strainer and pressure gauge, 6 feet of wire-bound suction hose, one 15 foot lead of ⅜-inch 7-ply discharge hose, one Fembro No. 1290 nozzle, one 8 foot pipe extension. Shipping weight, 75 lbs..... 43.00

No. R309C—Same as R309A except also includes two 15 foot leads of ⅜-inch 7-ply discharge hose. Shipping weight. 80 lbs..... 52.50

For Pipe Extensions and other extras, see page 495.

Shipped from factory only, Ashland, Ohio. Prices F. O. B. factory. On rush orders we will telegraph the order to factory at our expense when so requested.

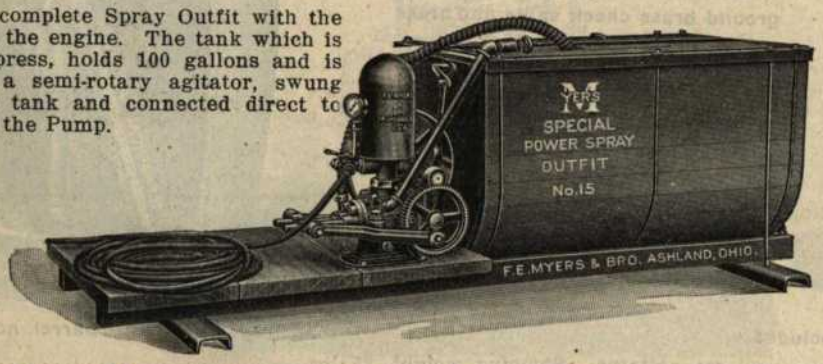
Showing No. R316B Outfit.

Myers Special Power Spray Outfit

From Factory, Ashland, Ohio.

For Telegraph Code see page front of Index.

This is a complete Spray Outfit with the exception of the engine. The tank which is made of cypress, holds 100 gallons and is fitted with a semi-rotary agitator, swung from top of tank and connected direct to face-plate of the Pump.



Shipped from factory only, Ashland, Ohio. Prices F. O. B. factory. On rush orders we will telegraph the order to factory at our expense when so requested.

The frame is 3-inch channel steel. The deck on which pump and equipment are mounted is 30x47 inches and made of 2-inch plank. The pump is double acting, back geared, 5 to 1, with a capacity of 6½ gallons per minute when running at a speed of 60 R. P. M. The cylinder is 2x4 inches, removable brass shell. The plunger is brass, telescope pattern, hemp packed, and will handle hot or cold mixtures. The valves and seats are made entirely of brass, beveled and ground. The piston is ⅝-inch solid brass with heavy brass stuffing nut. The gears and pinions have 1¼-inch face, and are machine cut. Equipped with 14x2½ inch belt pulley.

This is a very substantial outfit, will do excellent work, and can be used with any make of engine.

The outfit regularly includes 25 feet ½-inch high pressure discharge hose with fittings complete, double cut-off for discharge lines, pressure gauge, agitator, belt tightener, relief valve, strainer, suction hose, and one Myers spray gun.

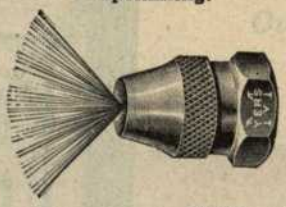
No. 15—Shipping weight 500 lbs..... Each, 132.00

Myers Spray Nozzles and Fittings

All Nozzles Fitted With Standard ¼-inch Pipe Thread.

Imperial.

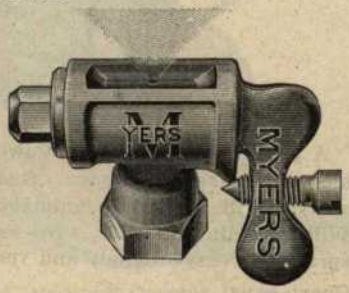
Sprinkling.



No. 642—Imperial . . . . . Each, .50
No. 548—Sprinkling . . . . . Each, .35

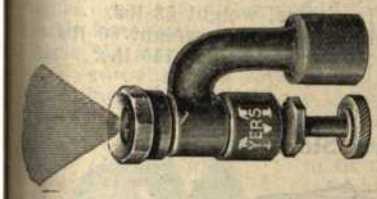
Bordeaux

The Bordeaux Nozzle will throw a fine fan-shaped spray and will readily free itself, should it become clogged, by turning the cock handle. It will throw a solid stream or it may be shut off altogether, as desired. Especially adapted for whitewashing



Each
No. 2097—Bordeaux . . 1.10

Vermorel.

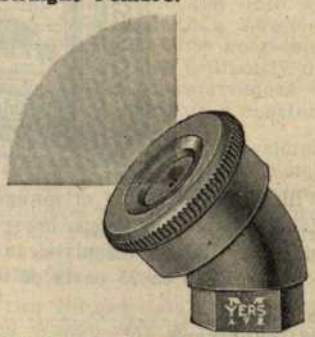


These Vermorel Nozzles are fitted with two removable plates, giving fine and coarse spray. No. 1563 has a spring cleaner so all that is necessary is to strike the thumb nut against a limb to clean it. No. 1564 graduates the spray from a fine mist up to a solid spray. It cleans with a screw.

No. 1065 double Vermorel nozzle is similar to No. 1563 except has two nozzles coupled together with a Y.

No. 1563—Regular Vermorel Nozzle . . . . . Each, .90
No. 1564—Graduating Vermorel Nozzle . . . . . Each, .90
No. 1065—Double Veromel Nozzle . . . . . Each, 2.15

Angle and Straight Fembro.

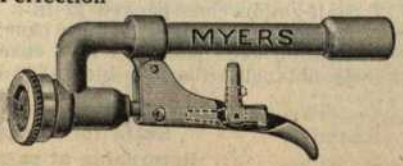


These Fembro nozzles have a capacity of about 3 times the ordinary nozzle. They are fitted with a removable steel disc in the cap.

No. 1290—Straight . . . . . Each, .70
No. 1559—45 degree angle . . . . . Each, .80

Fits any sprayer using ⅝-inch hose. Automatic in action, very simple and makes a long distance or wide cone-shaped spray.

Perfection



No. 1878 . . . . . Each, 1.60

Male End No. 1325

Male End No. 549

Female End No. 1091

¼-inch Pipe Thread on all.

No. 1325.—For ½in. hose . . . . . Each, .35
No. 1325A—For ⅜-in. hose . . . . . Each, .35
No. 549 —For ⅜ or ½-in. hose . . . Each, .30
No. 1091.—For ⅜ or ½-in. hose . . . Each, .30

Brass Hose Nipple

Hose thread one end and pipe thread on other end. For connecting hose and pipe.

No. 540—¾-inch . . . . . Each, .50

Brass Hose Coupling

Made with double length nipples, with heavy ribs, of sufficient length to use two hose bands. Adapted for use with Power Spray Pumps. Made in ⅜ and ½-inch sizes. State size wanted.

No. 1284 . . . . . Each, .95

Y for Two Nozzles

¼-inch pipe thread on all three ends.

No. 1560 . . Each, .60

Myers Lever Shut-off Cock

Lever Shut-off Cock, all brass. Made for use with Pipe Extension. Requires quarter turn only to shut off complete. This quick action makes it a practical device for the purpose. Tapped ¼ inch pipe size.

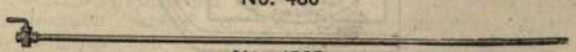
No. 1283 . . . . . Each, 1.10

Myers Pipe Extensions

All ¼-inch Pipe Thread Connections.

No. 1536

No. 480



No. 1535

The No. 1536 Bamboo Extension is made of selected bamboo, 10 ft. in length, through which is placed a special brass tube of ⅛-inch inside diameter, the shut-off lever and male end are attached to the brass tube by heavy threads (no solder) and has wide shield at top to prevent solution running down the pole.

Nos. 480 and 1535 are made of ¼-inch steel pipe, threaded at both ends and fitted as shown.

No. 480—8-foot pipe extension, with couplings . . Each, .80
No. 1535—8-foot pipe extension, with lever shut-off cock . . . . . Each, 1.80
No. 1536—10-foot bamboo extension, with lever shut-off cock . . . . . Each, 5.75

Cow-Ease

Put up in 5-gallon, gallon, half-gallon and quart cans.

A liquid preparation carefully compounded from effective materials. It is of the right consistency for applying with a sprayer, and it will not gum the hair or blister the skin.

Light applications of Cow-Ease are very destructive and repellant to lower animal life, such as many forms of ticks and vermin, yet are least harmful to higher animal life. It is an excellent article for spraying the interior of hen houses, also roost and dropping board; it will aid in keeping the house in sanitary condition.

The best way to use Cow-Ease is to apply it with one of our Cow-Ease or Sisco Sprayers (see page 490). These sprayers throw a very fine mist and it is easy to direct this mist where it needs to go and at the same time the application is a light one, which is all that is necessary.

Cow-Ease is widely advertised, and to those dealers who are anxious to get their share of the business we will furnish free electrotypes for their own advertising.

Store sign and circulars will be mailed by factory to any dealer on request.

Quart cans . . . . . Per doz., 7.20
Half-Gallon cans. . . . . Per doz., 10.80
Gallon cans . . . . . Per doz., 18.00
5-Gallon cans . . . . . Each, 7.00

Quart cans packed 24 in a case, weight 66 lbs.
Half-gallon cans packed 12 in a case, weight 63 lbs.
Gallon cans packed 12 in a case, weight 120 lbs.
5-gallon cans packed 2 in a case, weight 95 lbs.

Nourse Swat the Fly Spray

A preparation similar to Cow-Ease but somewhat cheaper. However, it will answer the same purpose. Harmless to the skin of animals but keeps the flies away. It will not injure the eyes, but should be put on the head with a rag. Used with a sprayer and is easy to apply.

Half-Gallons cans . . . . . Per doz., $10.56
Gallons cans . . . . . Per doz., $17.50
5-Gallon cans . . . . . Each. $ 6.00
In steel barrels, ½ bbls. or ¼ bbls. (Containers extra). . . . . Per gal.. $ 0.96

Half-gallon cans packed 12 in a case, weight 52 lbs.
Gallon cans packed 12 in a case, weight 111 lbs.
5-gallon cans packed 1 in a case, weight 44 lbs.
¼ bbls., 103 lbs.; ½ bbls., 250 lbs.; bbls., 420 lbs.

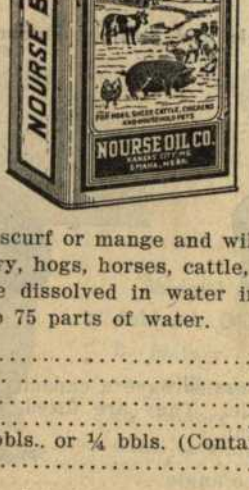
Nutriotone Fly Spray

A preparation similar to Cow-Ease but cheaper and will answer the same purpose. Guaranteed to keep the flies away. Will not injure animals, blister or gum the hair. Will not taint the milk. No carbolic odor. Used with a sprayer, is easy to apply and very effective.

Quart cans. . . . . Per doz., $ 7.00
Half-Gallon cans. . . . . Per doz.. $12.00
Gallon cans . . . . . Per doz., $22.00

Quart cans packed 24 in a case, weight 63 lbs.
Half-gallon cans packed 12 in a case, weight 60 lbs.
Gallon cans packed 12 in a case, weight 110 lbs.

Nourse Stock Dip



Will cure scab, scurf or mange and will knock out mites and lice on poultry, hogs, horses, cattle, sheep and household pets. To be dissolved in water in a proportion of one part of dip to 75 parts of water.

Quart cans. . . . . Per doz., $ 8.60
Half-Gallon cans. . . . . Per doz., $13.38
Gallon cans. . . . . Per doz., $24.00
5-Gallon cans. . . . . Each, $ 8.70
In steel bbls.. ½ bbls.. or ¼ bbls. (Containers extra). . . . . Per gal., $ 1.50

Quart cans packed 12 in a case, weight 28 lbs.
Quart cans packed 24 in a case, weight 56 lbs.
Half-gallon cans packed 12 in a case, weight 52 lbs.
Gallon cans packed 12 in a case, weight 111 lbs.
5-gallon cans packed 1 in a case, weight 44 lbs.
¼ bbls., 103 lbs.; ½ bbls., 250 lbs.; bbls., 420 lbs.

Extra for Containers

Returnable at same price.

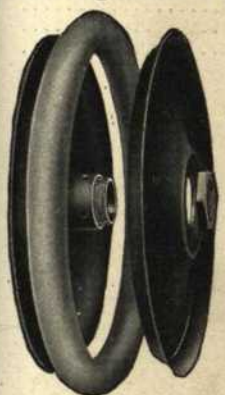
Steel quarter barrels $4.00
Steel half barrels $5.00
Steel barrels $7.00

No. 1049 Overland Coaster Wagon

SILENT
STURDY
SWIFT

Oversize Staytite Rubber Tires
Oversize Double Disc Wheels
Oversize Contained Roller Bearings
Oversize—locked on—Hub Caps

The superiority of the Overland Coaster Wagon shows up at a glance. The Overland is as substantial as it looks. A boy may outgrow his Overland Wagon, but he can't wear it out. This wonderful Overland model illustrated above reflects forty years of manufacturing experience. It is the acme of twenty-two years of coaster wagon development. Overland bodies are made of thoroughly seasoned and kiln dried, carefully selected hardwood. Bodies are carefully planed and sanded; neatly lettered in black, trimmed in red. Two full coats clear high grade coach varnish inside and out. Straight Grain Maple Tongue with steel loop handle. Bends back so wagon can be steered from box. Anti-Rattler Nut Locks prevent nuts and bolts from rattling and working loose. All steel below the body—gears are made of channel steel ⅞ inch wide by ⅜ inch deep. They are in the shape of a trussed arch which carries the weight of the load to the extreme ends of the axle—right next to the wheel. This eliminates axle strain—the axles remain straight and run true.



The oversize double disc wheels are built of two heavy pressed steel discs with rims curled to fit the extra heavy Staytite rubber tires. Discs firmly locked together by heavy cold rolled steel hub bushing. The wheels are finished in Overland red—just the right rich, deep shade to make the Overland the envy of every child who hasn't one of them. Each hub contains ten cold rolled steel shouldered bearings ¼ inch thick by 1⅛ inches long. Bearings held in place by pressed steel container, prevents their dropping out and being lost when wheel is removed. Won't crack or chip like ball bearings; won't "pile up" like thinner rollers—they keep wheels running smoothly during years and years of constant service. Carefully fitted and keep wheel from wabbling. Oversize pressed steel automobile Hub Cap heavily coppered, nickel plated and buffed—locked onto hub. Can be removed or replaced with a screw driver, but cannot be knocked off. They keep the grease in and the dirt out. They are brilliantly nickeled, adding to the distinctive attractiveness of the best looking wheel ever put on a coaster wagon.

Oversize Staytite Rubber Tires make fast riding easy and noiseless. Fit tight and keep sand and grit from working beneath the tires so there is no tire wear from the inside. Will deliver twice the mileage of same size tires put on by old-fashioned methods. When tires finally do wear out, they can be easily replaced. Anyone capable of handling a wrench can take the two discs of the wheel apart, remove the old, worn tire, replace it with a new one and put the wheel together again.

By simply loosening two winged nuts on the underside of the bed the rail or box of the Overland Wagon may be removed and the wagon stripped for speeding. It may be replaced as easily and quickly as it is taken off. Overland Radius Rod runs direct from underside of bed to center of front axle as shown in illustration above. It absorbs all shocks at the axle such as those which occur when the wagon runs into a tree, curbstone or lamp post. It eliminates all strain on the king bolt and steering gear. The Overland Roller Brake does not chafe or wear the tire. The brake shoe, which is not shown in the illustration, is a roller that conforms to the shape of the tire. The roller brake shoe fits loosely into the brake lever so that if pressure is applied the roller rubs against the lever and the wagon is stopped by friction within the brake itself and not by friction on the tires.

Each Wagon packed in a separate, sealed, dust proof carton.

Step Attachment.

This is an attachment to be placed on the rear axle of the Overland Coaster Wagon. It can be used on either No. 120A or No. 130A. It serves as a step or platform on which the boy can stand when coasting or to provide room for an extra passenger. Made of steel. It hooks over the rear axle and swings free, the weight of the step holding it to proper position. Step is made of hardwood. It hangs within the radius of the wheels so that it cannot be struck or damaged when going down steps or over a curb.

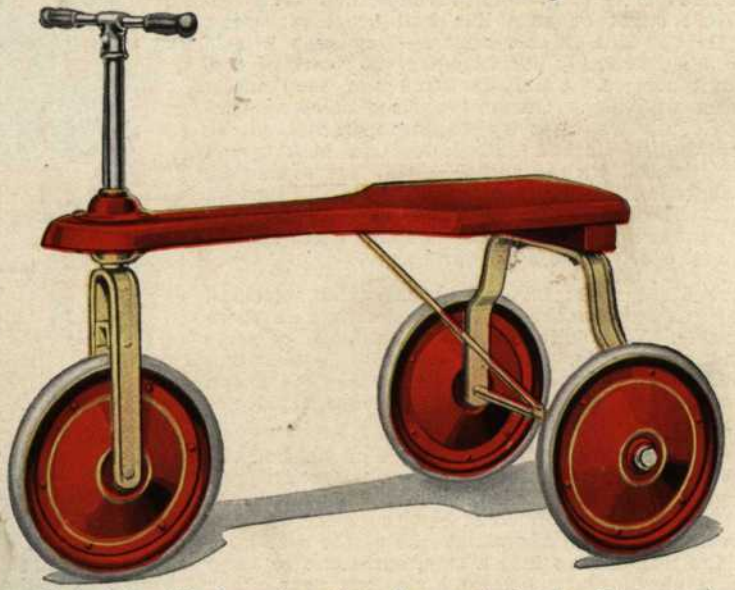
No.	Body	Wheels	Rubber Tires	Weight	Each
100A	12x28 ... 8	inches	¾-inch	24 lbs	7.95
110A	14x32 ... 8	inches	¾-inch	27 lbs	9.45
120A	14x34 ... 10½	inches	1-inch	38 lbs	10.35
130A	16x38 ... 10½	inches	1-inch	41 lbs	11.55
Rear Step Attachment for Nos. 120A or 130A, extra					.45

No. 1048 Overland Junior Wagon

The Overland Junior is just the thing for little tots. It answers their need for a play wagon that is not so large and heavy as a regular coaster, but which is at the same time strong enough for a child to ride in. This wagon is light but strong enough so that it is not quickly and easily broken up like a cheap toy wagon. The body is of clear, selected hardwood, with the name neatly stenciled in black, trimmed in red and covered, top and bottom, inside and out, with two coats of clear, high grade coach varnish. All steel below the body. Channel arch construction places weight of load at ends of axle near wheel. Axles are continuous. Wheels are made of double discs held together by center bushing and riveted at rim. The long roller bearings, which make the wagon run easy with a heavy load, are built right into the wheel itself. Highly polished nickel hub caps lock on over the hub and keep the grease in and the dirt out of the bearings. Wheels are beautifully and attractively enameled in red. Other metal parts finished in black. Overland Junior is furnished in three sizes. All of them light enough to be safe for the toddlers just learning to walk, and strong enough to withstand the rough treatment of a child several years old. Two wagons of each size packed in a separate, sealed, dust-proof carton.

No.	Body	Wheels	Rubber Tires	Weight	Each
301A	9½x19	5-inch	½-inch	9 lbs	3.60
302A	10½x24	6-inch	⅝-inch	12 lbs	4.80
303A	12 x28	7-inch	⅝-inch	15 lbs	5.55

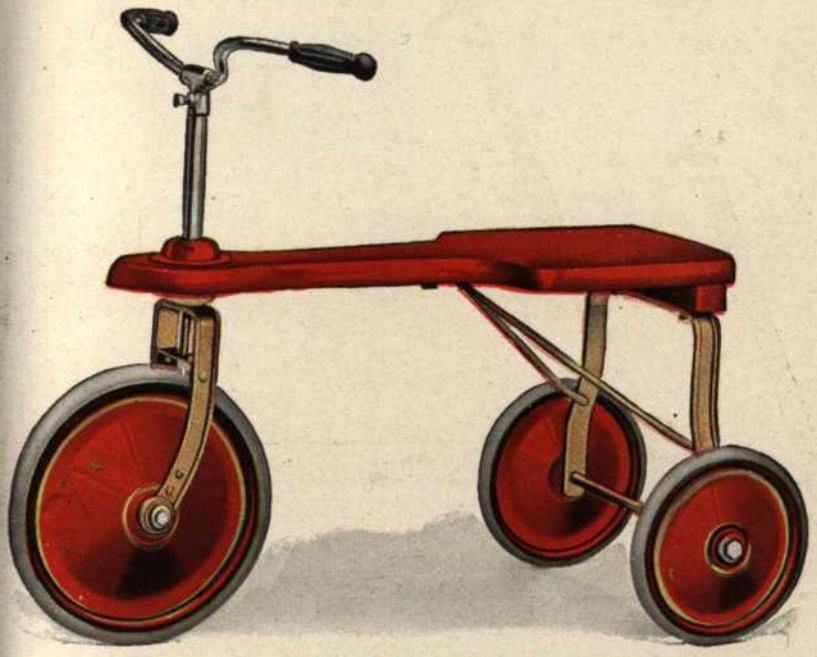
No. 1091 Overland Play Car



The front fork is of channel steel heavily braced so that it cannot bend. The steering post is solid, cold-rolled steel and is held upright in a steel bearing that is about 2½ inches in length so that the steering post cannot twist and wear wobbly. The handle-bar is gripped in a malleable iron clamp. This has a square socket which fits over the top of the steering post. The cushion rubber handle grips and nickel-plated finish of the steering post and handle-bars add materially to the appearance of this attractive vehicle. The rear arch of channel steel and the brace which runs directly from the axle to the underside of the seat are finished in an attractive shade of yellow, as is the front fork. The seat and wheels are finished in a high gloss enamel in red. The rear axle is continuous, extending from one side to the other, so that where the children play in pairs the child who does the pushing has a place to step on behind. Front wheel ball bearing; rear wheels roller bearing. Four Play Cars of each size packed in a sealed, dust-proof carton.

No.	Length over all	Width over all	Height over all	Seatboard	Wheels	Height of seat	Weight	Each
1	18 in	12 in	16 in	6 x17	5 in. x ½ in	8½	6½ lbs	3.30
2	20 in	12 in	17 in	6½x18	6 in. x ⅝ in	10	7½ lbs	3.90
3	23 in	12 in	18 in	7 x20	7 in. x ⅝ in	11½	8¾ lbs	4.65

No. 1028 Overland Play Car



These Play Cars offer a number of very decided improvements in construction which contribute materially to safety and ease of operation as well as to the life of the vehicle itself. Both the front fork and the rear arch are made of channel steel which has the necessary thickness as well as width to give plenty of strength without excessive weight. The channel steel arch in the rear permits a child who is pushing to stand on the rear axle and hold on to the shoulders of the one who is in the steering seat. The wheels are double disc with roller bearings in the rear; ball bearings in front; oversize tires and beautifully polished nickel-plated hub caps —locked on so they can't be knocked off. A square steering post of cold-rolled steel prevents handle-bar from getting loose and twisting. The steering post bearing, instead of being of wood, is made of two inverted cups of heavy steel, bolted to the body. This bearing cannot swell and tighten. Being made of steel as hard as the steering post itself, it prevents the steering post from wearing wabbly. The Play Car is always easy to steer. Cushion rubber handle grips. Body and wheels covered with clear, smooth, brilliant Overland red finish. Front fork and rear arch enameled in rich yellow. Hub caps, steering post and handle-bars polished nickel.

Packed one in a separate, sealed, dust-proof carton.

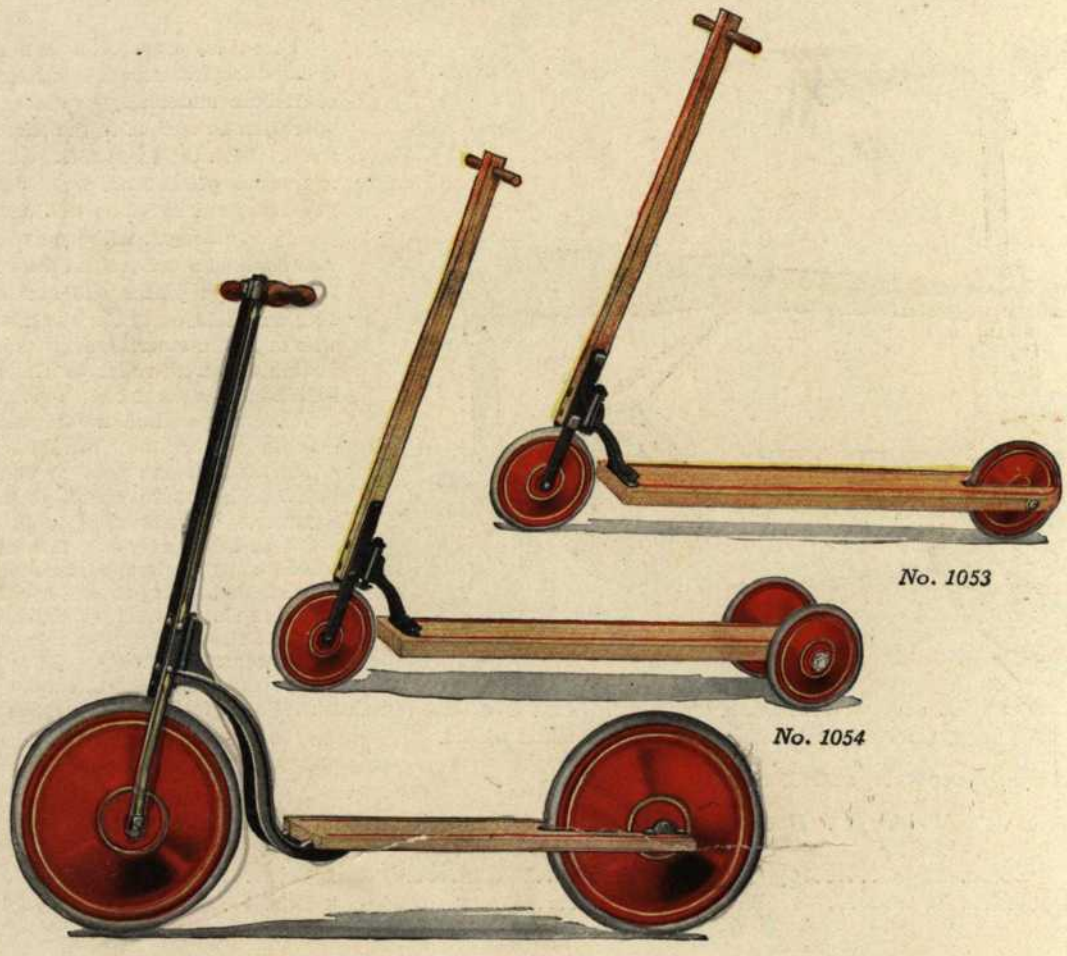
No.	Length over all	Width over all	Height over all	Seatboard	Height of seat	Front wheel	Rear wheel	Weight	Each
14	25 in.	13 in.	19½ in.	20½x7	11½ in.	8 in. x ¾ in.	6 in. x ⅝ in.	9 lbs.	5.40
15	28¾ in.	13 in.	21 in.	22½x8	13 in.	10 in. x ¾ in.	7 in. x ⅝ in.	10 lbs.	6.15

No. 1047 Overland Pedal Car

Similar to Play Cars except the front wheel is equipped with Pedals. Front fork and rear arch of channel steel, highly nickeled, locked-on hub caps, rubber cushion handle grips and pedals. Ball bearings in the front wheel and roller bearings in the rear make the Overland Pedal Car easy to run, and the oversize rubber tires make it practically noiseless. Front fork of channel steel is double braced—stiff and firm. The steering post runs up from the fork through a double bearing of steel as hard as the post itself. This 3-inch bearing holds the post upright. It is practically wear proof and prevents any needless play in the steering post. Being made of steel, it cannot shrink or swell to bind or tighten the steering post. Steering post is made of square cold-rolled steel. This makes it impossible for either front fork or handle-bars to get loose and twist. The Overland Pedal Car can always be accurately steered. Rear arch is of channel steel. It has thickness as well as breadth. Body as well as the wheels are finished in Overland red. Steel work below the body is enameled in a rich, bright yellow. All metal parts above are brilliantly nickeled. Packed one in a separate, sealed, dust-proof carton.

No.	Length over all	Width over all	Height over all	Seatboard	Height of seat	Front wheel	Rear wheel	Weight	Each
4	25 in.	13 in.	19½ in.	20½x7	11½ in.	8 in. x ¾ in.	6 in. x ⅝ in.	11 lbs.	5.70
5	28¾ in.	13 in.	21 in.	22½x8	13 in.	10 in. x ¾ in.	7 in. x ⅝ in.	12 lbs.	6.60

Overland Scooters



No. 1053

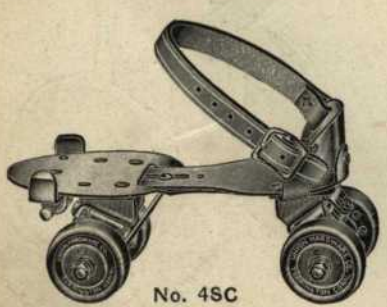
No. 1054

Nos. 1029—1060

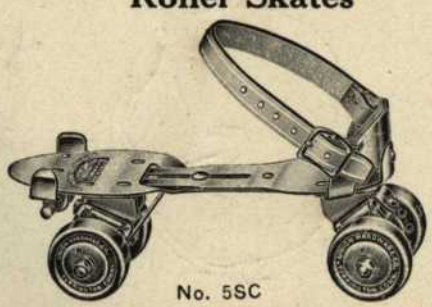
Overland Scooters are real sidewalk or pavement travelers. Run easily, swiftly and silently. Easily carried upstairs or taken into an elevator. Take up very little room in a home or apartment. Front bracket is strong, tough malleable iron, heavily ribbed. Clear hardwood footboard, ¾ inch by 6 inches wide, extends beyond axle of rear wheel. Steering post of the No. 1029 is adjustable. Its wheels are built of two heavily pressed steel discs locked together by a cold-rolled steel hub bushing. Can be taken apart to replace tires. Racing size, 10½ inches. Roller bearings, ¼ inch thick by 1⅛ inches long, in container; won't be lost when wheel is removed. Won't chip or crack like ball bearings or pile up like thin rollers. Overland Staytite Tires on the No. 1029 Scooter make fast riding easy and noiseless. Fit tight and keep sand and grit from working beneath tires. No wear from inside, tires can't come off, and will wear twice as long. The No. 1060 is similar to No. 1029 except in size of wheels. The Nos. 1053 and 1054 are made with 5-inch wheels and are intended for small children. The wheels are made of two discs securely riveted together and fitted with roller bearings and rubber tires. Footboard and body natural finish with red stripe. Wheels brilliant Overland red with double yellow band. Other metal parts black enamel.

No.	Length	Height	Wheels	Weight	Packed	Each
1053	29 in.	27½ in.	5 in. x ⅝ in.	4½ lbs.	Three in a carton	2.70
1054	29 in.	27½ in.	5 in. x ⅝ in.	5 lbs.	Three in a carton	3.45
1060	34 in.	35 in.	8 in. x ¾ in.	10 lbs.	Two in a carton	4.50
1029	36 in.	36 in.	10½ in. x 1 in.	12 lbs.	Two in a carton	5.25

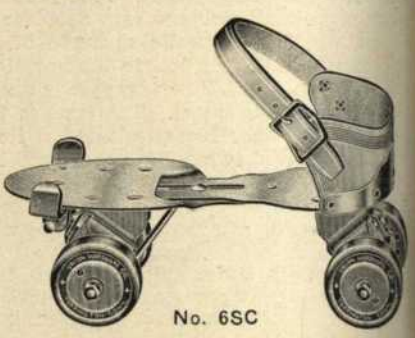
Roller Skates



No. 4SC



No. 5SC



No. 6SC

These skates are fitted with self-contained roller bearings. The tops, trucks, clamps, and stampings are made of the best cold rolled steel. Trucks are oscillating with best rubber cushions and turn in a three-foot circle. Straps are of the best grain leather. On Nos. 4SC and 5SC a formed steel loop protects the straps and prevents their cutting or pulling out.

No. 4SC—For Children. Half strap heel, small foot plate, clamp toe, nickel plated. Extends 6½ to 8½ ins. . Per pair, $3.30
No. 5SC—For Boys and Men. Same as No. 4, except larger foot plates. Extends from 8½ to 10¾ ins. . . . . Per pair, $3.30
No. 6SC—For Girls and Women. Full strap leather heel, clamp toe, nickel plated. Extends from 7½ to 10 ins. Per pair, $3.50

Manual Training and Wood Workers' Benches

Shipped from Factory Only, Chicago, Ill.

Built from the most carefully selected hard white maple thoroughly seasoned. ½-inch bolt construction. Equipped with two Christiansen saw cut threaded wood bench screws 2½ inches in diameter. Is heavily glued and has well finished working top.

Height, 34 inches. Working top, 16 inches wide, except No. 1B, which is 22 inches wide. Tool recess 8 inches wide. Legs. 2x3 inches.

Shipped knocked down to take lowest freight rate.

No. 1 —Top, 78x24 inches. Weight, 180 lbs..Each. $72.00
No. 1A—Top. 84x24 inches. Weight, 200 lbs..Each, $80.00
No. 1B—Top, 84x30 inches. Weight. 210 lbs..Each, $96.00
No. 1C—Top, 66x24 inches. Weight, 150 lbs..Each, $64.00

Built from the most carefully selected hard white maple thoroughly seasoned. ½-inch bolt construction. Fitted with two Wood Screw Vises, two wood stops, tool rack, tool recess, with or without drawer. Stand of 1¾x3-inch strongly mortised joints.

Height, 32 inches. Working top 13½ inches wide. Tool recess 8½ inches wide. Legs. 2x3 inches.

Shipped knocked down to take lowest freight rate.

No. 4—Top. 48x22 inches. Weight, 120 lbs...Each, $32.00

Built from the most carefully selected hard white maple thoroughly seasoned. ½-inch bolt construction. Equipped with Abernathy Roller Nut Rapid Acting Vise No. 70D. Has a single drawer without lock, with two good quality drawer pulls. Has adjustable steel bench stop and rack for tools.

Height, 32 inches. Working top. 14½ inches wide. Tool recess, 7¾ inches wide. Legs, 2x3 inches. Drawer. 22x19x6 for 42-inch length. Drawer, 32x19x6 for 52-inch length.

Shipped knocked down to take lowest freight rate.

No. 16—Top, 42x22¼ inches. Weight, 126 lbs.Each, $44.00
No. 16—Top, 52x22¼ inches. Weight, 140 lbs.Each, $48.00

Built from the most carefully selected hard white maple thoroughly seasoned. ½-inch bolt construction. Equipped with one Steel Screw Vise. Has one large drawer without lock. It stands perfectly rigid.

Height, 32 inches. Working top. 13½ inches. Tool recess, 8½ inches. Legs, 2x3 inches.

Shipped knocked down to take lowest freight rate.

No. 21A—Top. 48x22 inches. Weight, 120 lbs..Each, $32.00

Built from the most carefully selected hard white maple thoroughly seasoned. ⅜-inch bolt construction. Equipped with Abernathy Rapid Acting Vise No. 70D, same as No. 16 Bench. metal dog and adjustable bench stop. Four private drawers, equipped with locks.

Height, 32 inches. Working top, 15 inches wide. Tool recess, 7 inches wide. Legs, 2x3 inches. General drawer, 32x17x5 inches. Private drawer, 15½x7x5 inches.

Shipped knocked down to take lowest freight rate.

No. 205—Top, 52x22 inches. Weight. 200 lbs..Each, $76.00

Built from the most carefully selected hard white maple thoroughly seasoned. ⅜-inch bolt construction. Is similar to general construction, equipment and finish of No. 205, but has a large cupboard and no general drawer, but instead has three private drawers all the same size, equipped with locks. Fitted with two saw cut threaded Screw Wood Vises. Holes for wood stops are mortised conveniently near the front. and two spring wood stops are regularly furnished with each bench.

Height. 32 inches. Working top 13½ inches wide. Tool recess 8½ inches wide. Private drawers, 18x16x5 inches. Cupboard, 18½x18¼x10 inches.

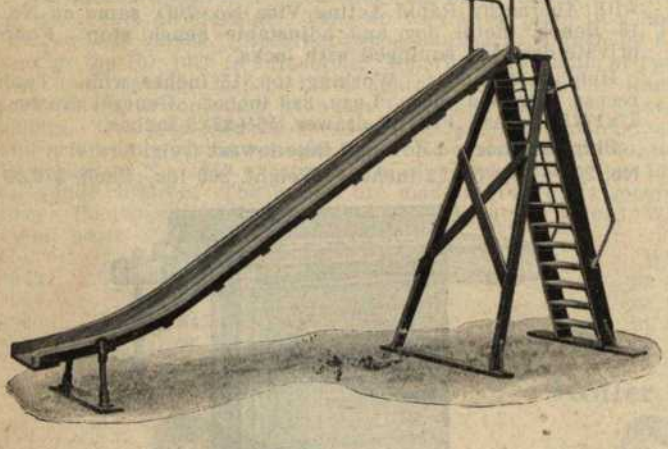
Shipped knocked down to take lowest freight rate.

No. 13—Top, 48x22 inches. Weight, 160 lbs..Each, $56.00

Fun-Ful Playground Equipment

Shipped from Factory, Anderson, Ind.

We are in a position to completely outfit public or private playgrounds, also swimming pool and bathing beaches, with the most modern and up-to-date equipment. The goods we offer are made by a company who excells in this line of endeavor, who has devoted upwards of twenty-three years exclusively to the development and manufacture of outdoor health building apparatus, and who is the largest manufacturer of this class of goods in the country. Because of so many numbers in this line, we can here illustrate and describe only a few popular pieces. Information covering other apparatus will be found in a large complete catalog which will be sent on request.



Fun-Ful Special Slide No. 410

This is a very popular Slide, being mostly of hardwood and made in large quantities enables the factory to offer them at a very reasonable price, much lower in cost than the steel construction yet good enough for average use. Height over all, 10 ft. Top platform 8 ft. above ground, chute length 16 ft. Painted moss green, galvanized hand rails. Weight, packed, 450 lbs. Chute bedway may be had in Armco galvanized rust-proof iron or Rock Maple, customer's choice, no difference in cost. Ask for complete catalog for 24 different styles and types of Slides.

No. 410.....Each, 150.00

Ball-Bearing Giant Stride

This without question is the best Giant Stride on the market. Few parts. Unusually strong. Ball bearings run submerged in oil. Absolutely guaranteed to give satisfaction.

No. 220—Head, base flange, top plug and 6 ladders. No pipe. Weight, packed, 125 lbs.....Each, 77.00

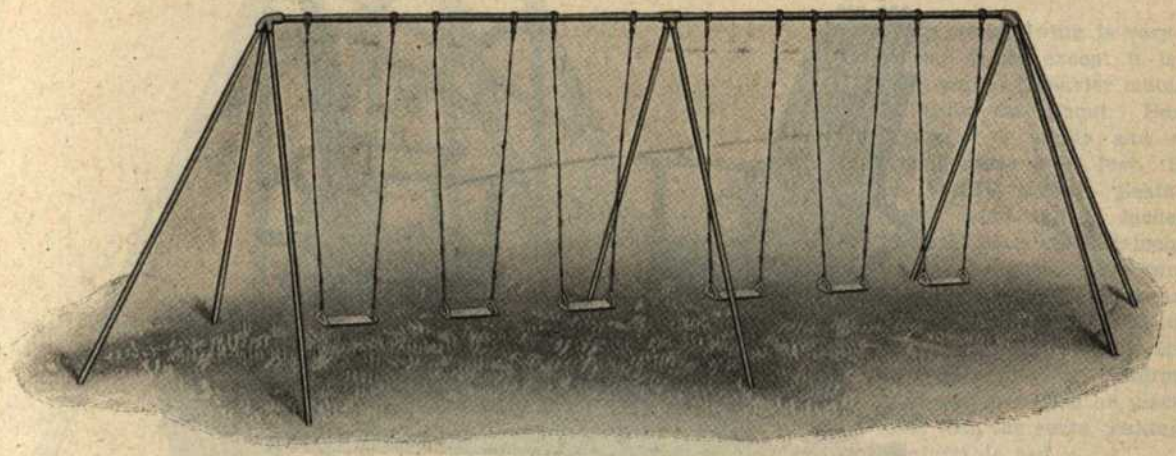
No. 221—Head, base flange, top plug and 8 ladders. No pipe. Weight, packed, 136 lbs.....Each, 88.00

No. 224—Galvanized pipe 18 ft. 4 in. Weight 180 lbs. .....Each, 40.00

No. 225—Painted pipe 18 ft. 4 in. Weight 180 lbs. .....Each, 35.00

Fun-Ful Playground Equipment—Continued

Shipped from Factory, Anderson, Ind.



Standard Six-Swing Outfit No. 310

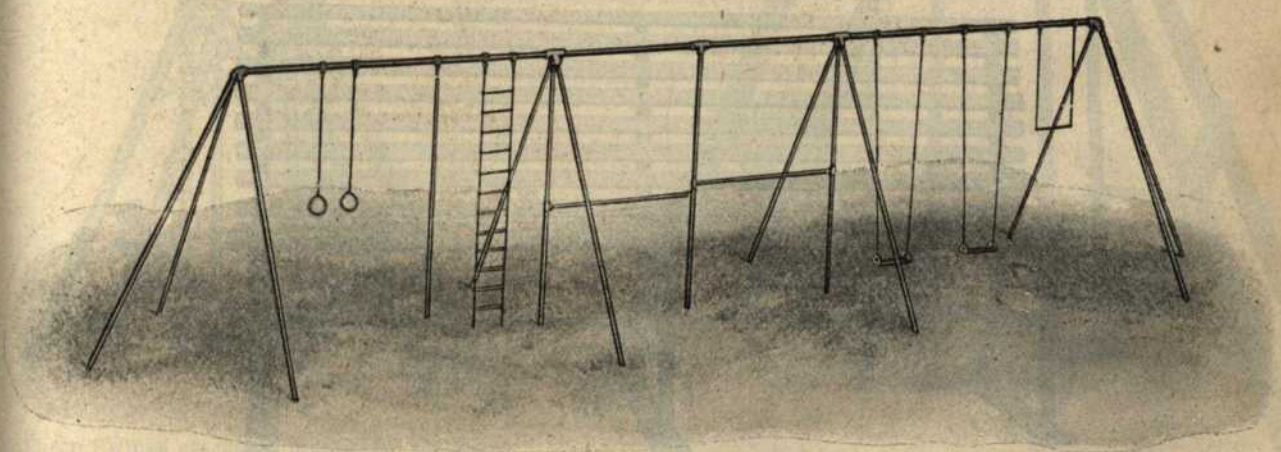
A playground should have at least one good swing set. This set illustrated is made entirely of steel except the seat boards, which are of hardwood, well painted. Swing hangers are ball bearing and noiseless and will render many years of service with little attention. Chain links are of ⅜-inch round steel, 11 inches in length each, which insures ample strength, long life, and affords an excellent handhold. Height over all, 12 feet; length over all, 42 feet; width over all, 12 feet.

No. 310—Six Swings, all fittings, no pipe. Weight 650 lbs.....Per set, 160.00
No. 311—Galvanized Pipe only, less fittings. Weight 250 lbs.....Per set, 125.00
No. 312—Painted Pipe only, less fittings. Weight 250 lbs.....Per set, 100.00

Standard Three-Swing Outfit No. 313

This is of same general design and construction as No. 310, except three swings are used instead of six. Very strong and substantial, and considerably lower in cost. As all Fun-Ful equipment, it is guaranteed to be satisfactory. Height over all, 12 feet; length over all, 25 feet; width over all, 12 feet.

No. 313—Three Swings, all fittings, no pipe. Weight 150 lbs.....Per set, 90.00
No. 314—Galvanized Pipe only, less fittings. Weight 450 lbs.....Per set, 90.00
No. 315—Painted Pipe only, less fittings. Weight 450 lbs.....Per set, 70.00



Outdoor Gymnasium No. 375

This outfit is used extensively; will accommodate children of all ages, and has capacity for ten children at a time. Height over all, 14 feet; length over all, 56 feet; width over all, 14 feet. This is only one of the many outdoor gymnasium combinations which we are in a position to furnish. Ask for large catalog for other combinations.

No. 375—All apparatus and fittings, no pipe. Weight 335 lbs.....Per set, 200.00
No. 376—Galvanized Pipe only, less fittings. Weight 1,075 lbs.....Per set, 200.00
No. 377—Painted Pipe only, less fittings. Weight 1,075 lbs.....Per set, 170.00

Boyer's Gliding Settee

Boyer's Gliding Settee is the one low-down swing manufactured which is free from all trouble-producing, noisy devices, unique patented features of great simplicity forming the basis of its construction. The rockers are made of steel, operating silently upon a hardwood base. The seats have the shaped "form-fit" construction and in its manufacture every detail has been brought to the greatest degree of perfection. It will comfortably seat four people.

The motion is gliding and not of the dipping, swinging nature found in the usual lawn or porch swing, which is a positive assurance that in using Boyer's Gliding Settees no one will experience dizziness or seasickness. The even, gentle glide, produced by the slightest pressure of the foot, is most pleasing and an especial delight to children, who can use it with the greatest safety, its low-down construction allowing them to enter or leave the swing while the swing is in motion.

Boyer's Gliding Settee is readily and easily set up by following the clear and explicit directions found attached to each swing.

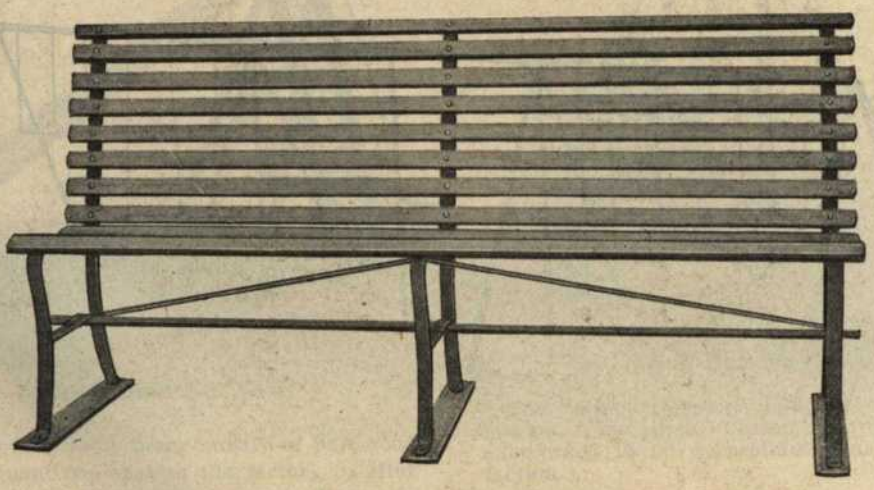
Can be converted into a bed or hammock by removing a section of the footboard, placing it top side down between the seats, and inclining the back to any desired angle. One Swing, packed knocked down, in a crate.

Finished in natural wood, with green footboard and base, varnished.

No. 1.....Each, $26.50

Weight, 160 lbs.

Lawn Seats



This makes a fine seat for the Lawn or Garden. Also an ideal bench for Parks, Public Rest Rooms, etc.

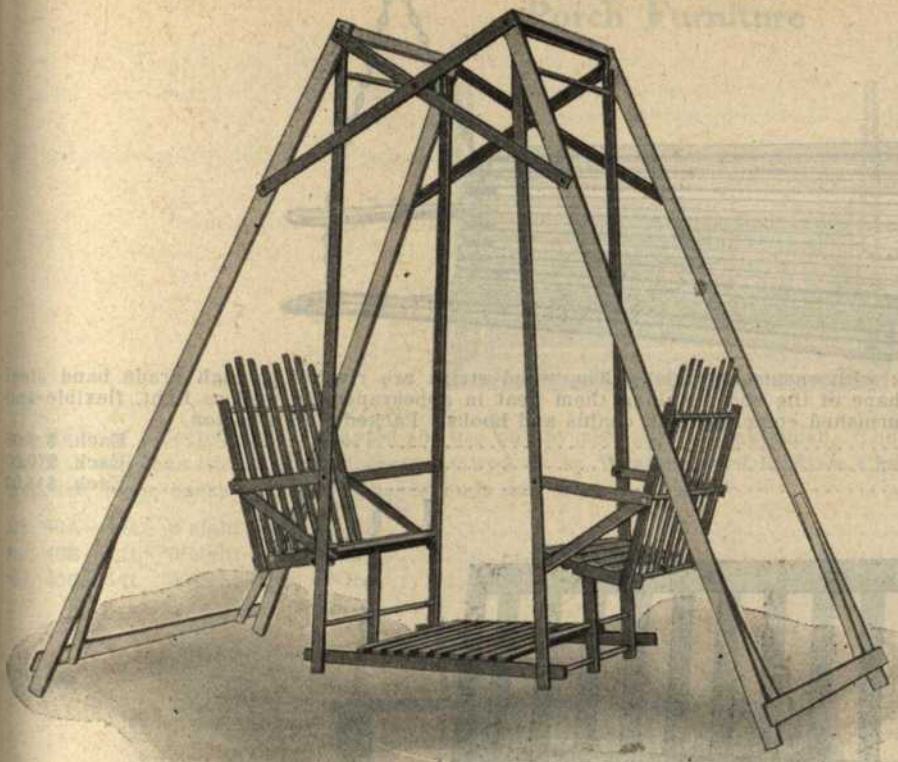
It is the strongest, most substantial and carefully built seat on the market. Back and seat are arranged to make it easy and comfortable for both children and grownups. Can be easily carried around.

The legs are constructed of Bessemer Steel. Slats are of strong hardwood, 1¾ inches wide and ⅞ inch thick. Painted a rich green. Shipped knocked down. Very easy to set up.

No. 1014—4-foot.....Each, $10.50
No. 1016—6-foot.....Each, $12.00

No. 1014 weighs 52 lbs. No. 1016 weighs 82 lbs.

Sisco Lawn Swing



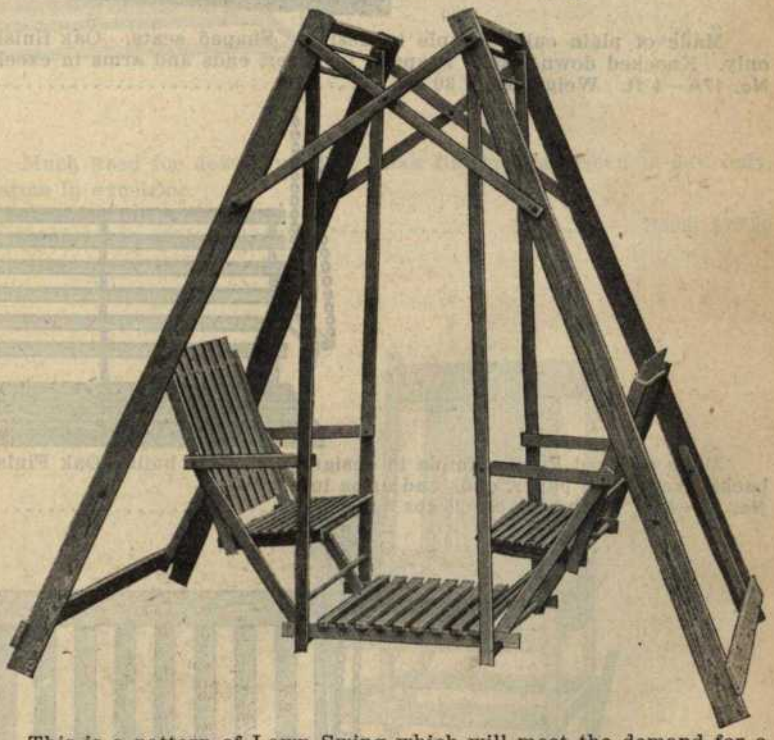
The Sisco Swing is very similar to the Arctic except it is 9 feet high, made of heavier material and is larger throughout. Has a capacity of 4 adults and occupies ground space 6x9½ feet. Uprights are 1½x2½ inches. Seats are 36 inches wide and 14 inches deep. The back slats are 32¾ inches high. Swinging uprights have two rounds at the bottom. The footboard is adjustable and can be used on either one of the rounds. This feature is especially fine for children. The footboard can also be placed on a level with the seats, making a very comfortable bed.

Frame is painted bright red and varnished, hangers and footboard natural varnished finish.

Shipped folded flat.

No. 1013—Sisco Lawn Swing.....Each, $20.00
Shipping weight, 125 lbs.

Arctic Lawn Swing



This is a pattern of Lawn Swing which will meet the demand for a well-built swing at a popular price.

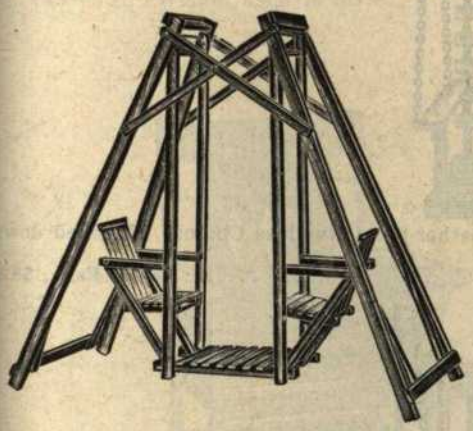
It is 8 feet high, strongly constructed, solidly braced, nailed and bolted. Uprights are 1x4 inches. The seats are 31½ inches wide by 13½ inches deep and will comfortably seat 4 adults. Occupies space on the ground 5x8 feet. The back slats are 27 inches high.

Attractively painted in red and green.

Shipped folded flat.

No. 1012—Arctic Lawn Swing.....Each, $15.50
Shipping weight, 105 lbs.

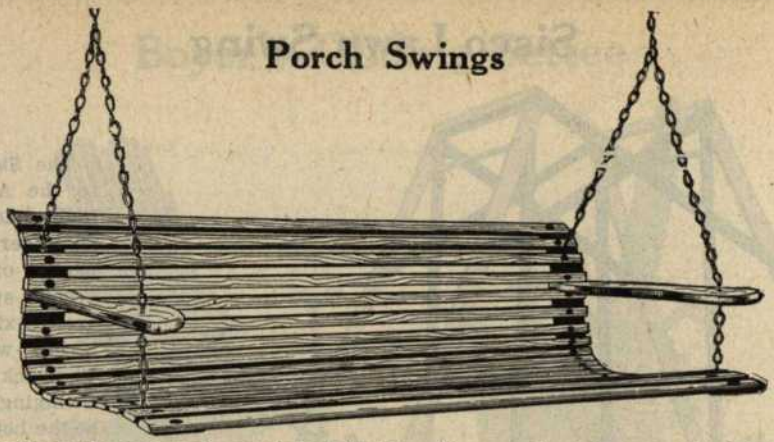
Juvenile Swings



These Swings are made practically the same as the Sisco except in size. Juvenile Swings are intended for small children and make an ideal plaything for the little folks. Height 6 ft. Seating capacity for two children and occupies ground space 3½x6½ feet. Uprights are ⅞x2 inches. Seats are 15 inches wide and 9½ inches deep. The back slats are 14¾ inches high. Swinging uprights have two rounds. Finely finished in red and green. Shipped folded flat.

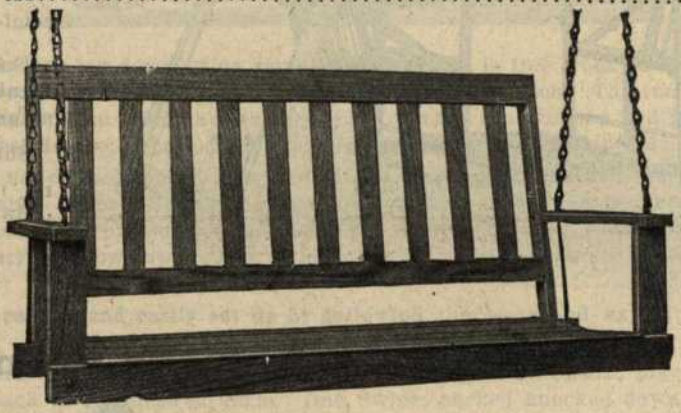
No. 0103—Juvenile Swing.....Each, $9.50
Shipping weight, 54 lbs.

Porch Swings



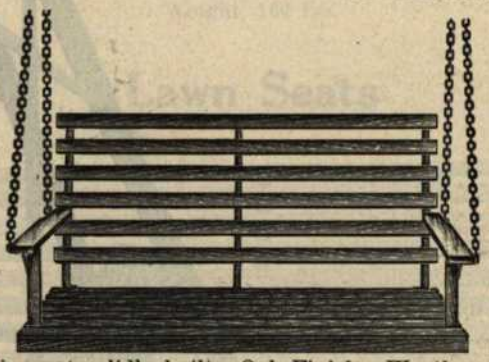
Made of selected straight grain oak with varnished finish. The wood strips are riveted to high grade band steel formed in curves that conform to the shape of the body, making them neat in appearance, as well as light, flexible and durable. A very comfortable swing. Furnished complete with chains and hooks. Packed 1 in a carton.

No. 54—4 ft. Weight each 40 lbs.....Each, $ 9.00
No. 55—5 ft. Weight each 45 lbs.....Each, $10.00
No. 56—6 ft. Weight each 50 lbs.....Each, $11.00



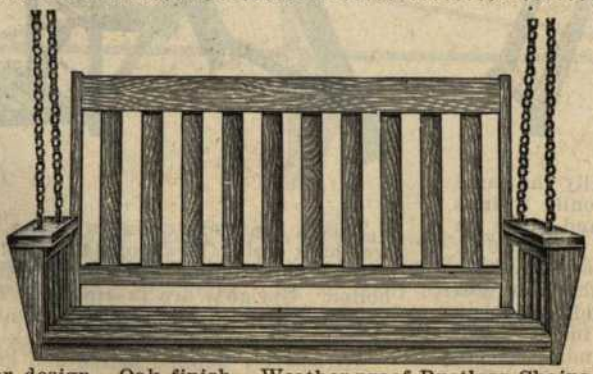
Made of plain oak. Simple in design. Shaped seats. Oak finish. Weatherproof, rustless chains. Furnished in 4 ft. only. Knocked down, backs wrapped in paper, ends and arms in excelsior.

No. 17A—4 ft. Weight each 30 lbs.....Each, $6.80



Made of Hard Pine. Simple in design yet solidly built. Oak Finish. Weather-proof Rustless Chains. Knocked down, backs wrapped in paper, ends and arms in excelsior.

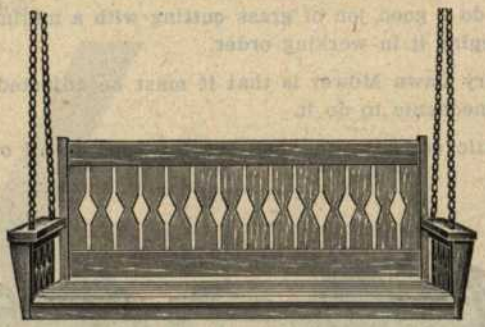
No. 18—4-ft. Weight each, 26 lbs.....Each, $5.80



Made of Plain Oak. A popular design. Oak finish. Weather-proof Rustless Chains. Furnished in 4 and 5-ft. lengths. Knocked down, backs wrapped in paper, ends and arms in excelsior.

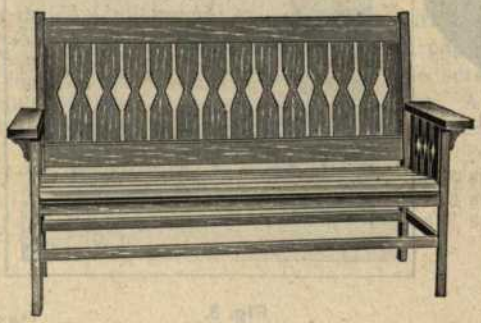
No. 3A—4-ft. Weight each, 37 lbs.....Each, $ 9.20
No. 3B—5-ft. Weight each, 44 lbs.....Each, $10.70

Porch Furniture



Made of Selected Oak. Adapted for use on any size porch. Oak finish. The use of bolts in the construction assures strength and long life. Diamond shaped sawed slats. Weather-proof Rustless Chains. Furnished in 4, 5 and 6-ft. lengths. Knocked down, backs wrapped in paper, ends and arms in excelsior.

No. 40A—4-ft. Weight each, 41 lbs.....Each, $11.80
No. 40B—5-ft. Weight each, 46 lbs.....Each. $13.80
No. 40C—6-ft. Weight each, 50 lbs.....Each, $16.00



Made of selected oak. Roomy and comfortable. Much used for den furnishing. Oak finish. Furnished in 5-ft. only. Knocked down, backs wrapped in paper, ends and arms in excelsior.

No. 44B—5 ft. Weight each 45 lbs.....Each, $13.20

Made of selected oak. For use on any size porch. The use of bolts throughout insures strength and long life. Oak finish. Knocked down, backs wrapped in paper, ends and arms in excelsior.

No. 42—Chairs. Weight each 21 lbs.....Each. $7.50

Made of selected oak. This Rocker is roomy and comfortable. Used in large numbers in lodge rooms, halls, etc. Oak finish. Knocked down, backs wrapped in paper, ends and arms in excelsior.

No. 43—Rocker. Weight each 25 lbs.....Each, $8.20

Lawn Mowers

The important thing to be considered in buying Lawn Mowers, not only by the consumer but the dealer and jobber as well, is to get a machine that will do a good job of grass cutting with a minimum of labor and one that will not need to be continually bothered with in keeping it in working order.

The great trouble with the ordinary Lawn Mower is that it must be adjusted so often to keep it lined up properly, and some of them require an expert mechanic to do it.

The cuts below show the automatic self-adjusting ball bearing used on all our ball bearing mowers.

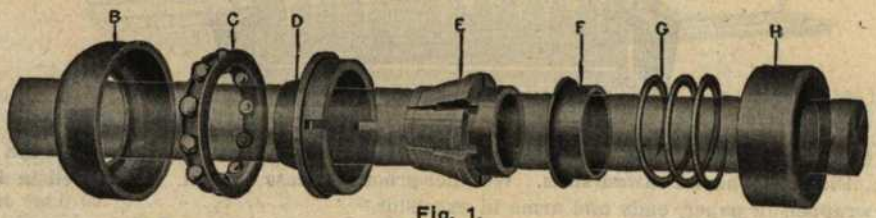


Fig. 1.

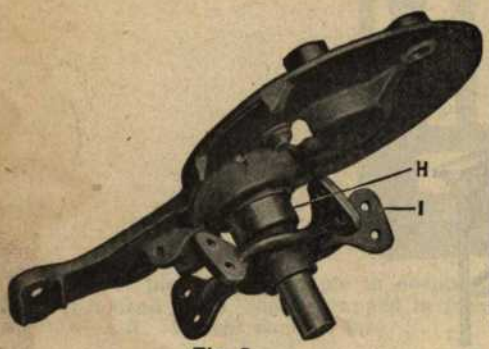


Fig. 2.

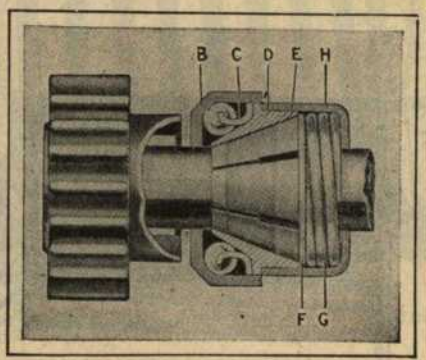


Fig. 3.

Fig. 4.

Fig. 1 shows the relative position of the parts widely separated.

Fig. 2 at "H" shows the parts when compressed into position and ready for action, the steel casing "H" which encloses the parts, being visible.

Fig. 3 is a sectional view of parts in operating position.

Fig. 4 at "A" shows the milled recess in the side plate of the mower into which the carbonized vanadium steel ball case "B" is forced under pressure.

There are other so-called self-adjusting ball bearing mowers being offered, but in every case the adjustment is effected by means of a spring acting DIRECTLY against the cone. In such a device it is apparent that the spring pressure being uncontrolled, is, owing to the varying conditions under which the mower works, either too tight or too loose. If too tight, the mower runs hard and all the good of a ball bearing is neutralized. If too loose, the revolving cutters will jump up and down on the lower knife, leaving the grass uncut. In the adjustment here illustrated the contracting sleeve is the important and controlling factor which secures the bearing parts in proper position under all conditions. Being sensitive to pressure, this contracting sleeve, by reflex action, instantly clutches the shaft when all looseness is taken up by the spring action and prevents any further forward pressure. This contracting sleeve, therefore, constantly accommodates the ball bearing parts to varying conditions and keeps them in a state of perfect adjustment, releasing and contracting as pressure requires.

The superiority of this adjustment will readily be seen. IT CONTROLS ITSELF. It is scientifically correct. It is fool proof. There are no screws to work out or be tampered with.

This device insures the lightest running Lawn Mower ever placed on the market and one that will remain in perfect adjustment at all times without the slightest attention.

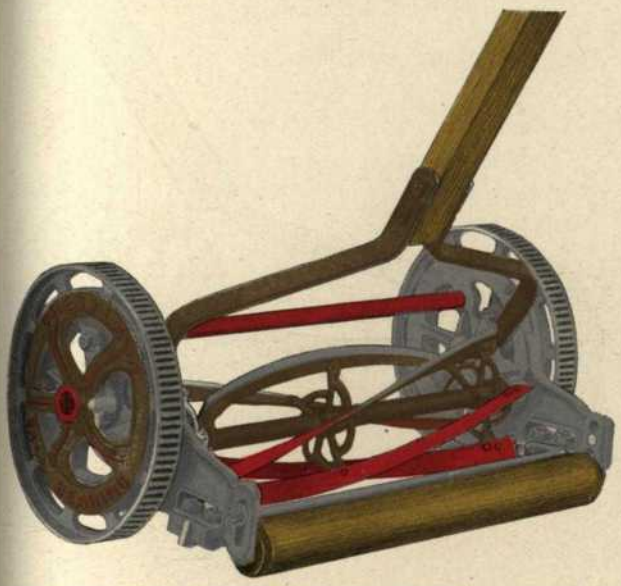
Only when the bearings of a mower are kept in perfect adjustment as described will all of the revolving blades touch evenly along the entire length of the lower knife, and only in such manner is a mower self-sharpening, otherwise the mower is self-dulling.

This illustration shows the handle which is furnished on practically all of our Lawn Mowers illustrated on the following pages.

Lawn Mowers—Continued

CRESTLAWN BALL BEARING

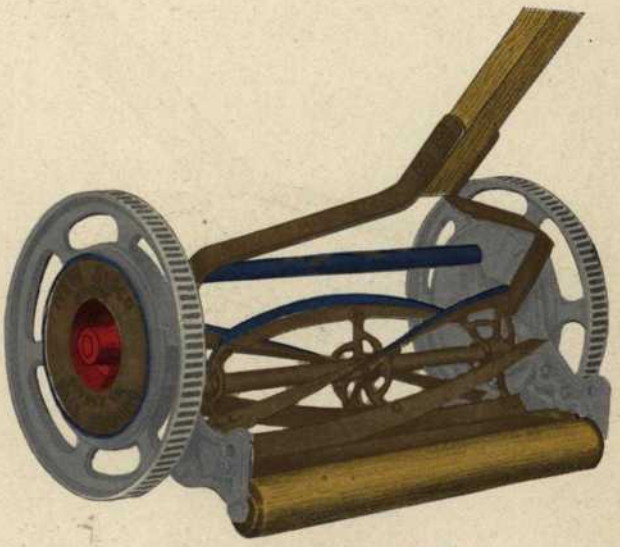
Every Bearing Ball Bearing.



Equipped with self-adjusting ball bearings on reel as illustrated on page 508. 10½-inch wheels, 6-inch reel, 5 blades. Double bolt adjusting cutter bar. Finished in colors as shown. In addition to ball bearing reel, this machine also has ball bearing wheels, making it very easy running, and we offer it as the height of perfection in Lawn Mower construction.

16-inch, 5 blades, 3 spiders. Wgt., 68 lbs.....Each, **$34.30**
18-inch, 5 blades, 4 spiders. Wgt., 73 lbs.....Each, **$35.70**
20-inch, 5 blades, 4 spiders. Wgt., 75 lbs.....Each, **$37.00**

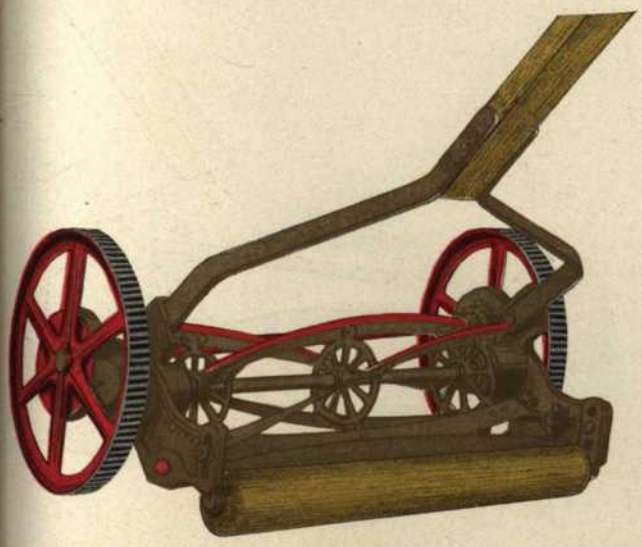
NEW SISCO BALL BEARING



Equipped with self-adjusting ball bearings on reel as illustrated on page 508. 11-inch wheels, 6-inch reel, 5 blades. Double screw adjusting cutter bar. Finished in colors as shown. A very easy running machine that will leave the lawn smooth and in excellent condition.

16 inch, 5 blades, 3 spiders. Wgt., 62 lbs.....Each, **$27.50**
18-inch, 5 blades, 4 spiders. Wgt., 64 lbs.....Each, **$29.00**
20-inch, 5 blades, 4 spiders. Wgt., 69 lbs.....Each, **$30.20**

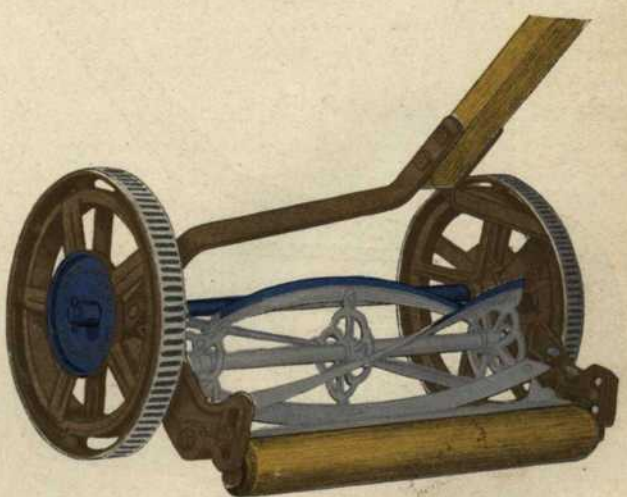
SPEEDWELL TIMKEN ROLLER BEARING



Equipped with Timken Roller Bearings, self adjusting, with triple gears. 10-inch wheels, 6-inch reel, 5 blades. Double screw adjusting cutter bar. Can be adjusted to cut within ¼ inch of the ground if desired. Finished in colors as shown.

16-inch, 5 blades, 3 spiders. Wgt., 66 lbs.....Each, **$34.30**
18-inch, 5 blades, 4 spiders. Wgt., 69 lbs.....Each, **$35.70**
20-inch, 5 blades, 4 spiders. Wgt., 70 lbs.....Each, **$37.00**

EASY CLIPPER BALL BEARING



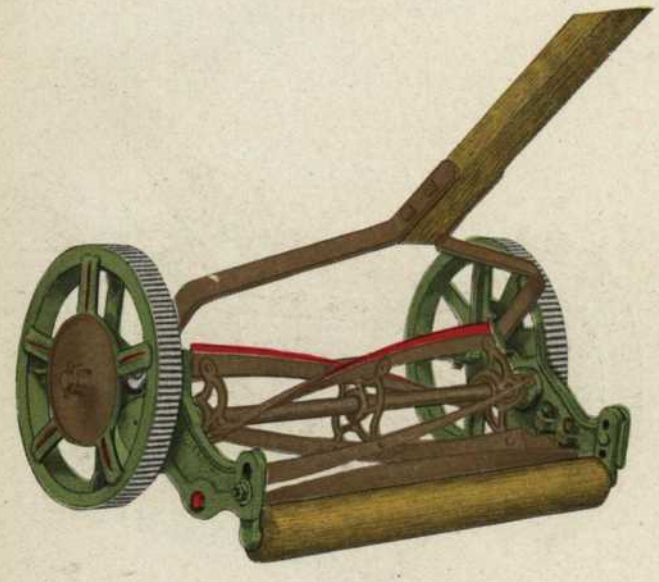
Equipped with self-adjusting ball bearings on reel as illustrated on page 508. 10½-inch wheels, 6-inch reel, 4 blades. Double screw adjusting cutter bar. Finished in colors as shown. This is one of our most popular machines because of it being equipped with high wheels and at a very moderate price.

14-inch, 4 blades, 3 spiders. Wgt. 53 lbs.....Each, **$21.70**
16-inch, 4 blades, 3 spiders. Wgt., 56 lbs.....Each, **$22.70**
18-inch, 4 blades, 4 spiders. Wgt., 62 lbs.....Each, **$23.60**

Weights shown are for Mowers boxed for shipment and are approximate.

Lawn Mowers—Continued

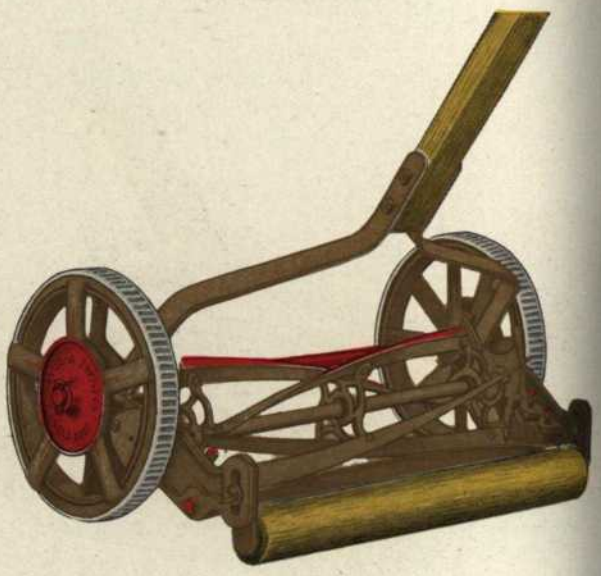
SILVER MOON BALL BEARING



Equipped with self-adjusting ball bearings on reel as illustrated on page 508. 9-inch wheels, 5½-inch reel, 4 blades. Double screw adjusting cutter bar. Finished in colors as shown.

14-inch, 4 blades, 3 spiders. Wgt., 43 lbs.....Each, **$19.20**
16-inch, 4 blades, 3 spiders. Wgt., 47 lbs.....Each, **$19.90**
18-inch, 4 blades, 4 spiders. Wgt., 50 lbs.....Each, **$20.60**

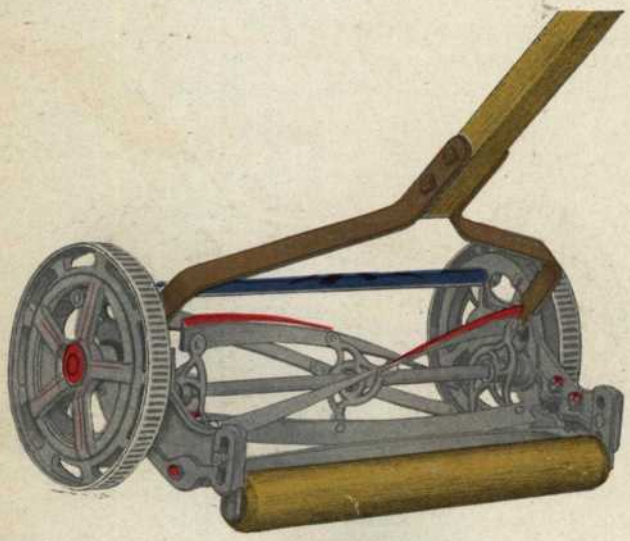
SUNBEAM PLAIN BEARING



This machine is not ball bearing, but the plain bearings on the reel shaft are made adjustable for taking up wear. 9-inch wheels, 5½-inch reel, 4 blades. Double screw adjusting cutter bar. Finished in colors as shown.

14-inch, 4 blades, 3 spiders. Wgt., 46 lbs.....Each, **$16.10**
16-inch, 4 blades, 3 spiders. Wgt., 49 lbs.....Each, **$16.70**
18-inch, 4 blades, 4 spiders. Wgt., 52 lbs.....Each, **$17.40**

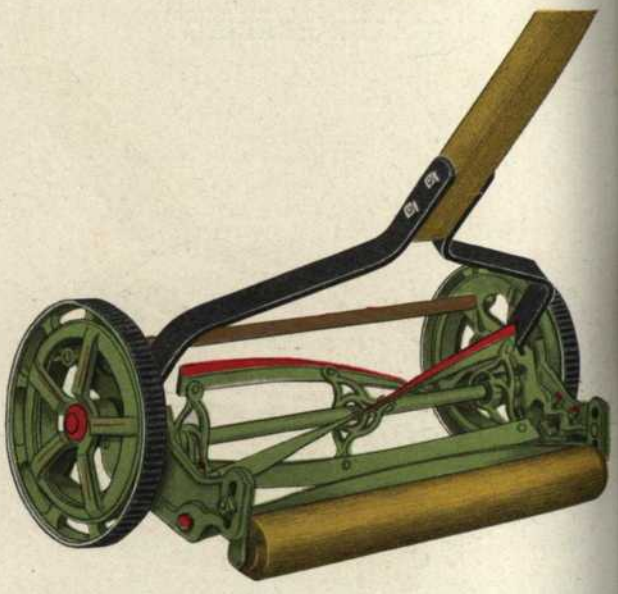
PARAGON BALL BEARING



Equipped with self-adjusting ball bearings on reel as illustrated on page 508. 8-inch wheels, 5½-inch reel, 4 blades. Double Screw adjusting cutter bar. Finished in colors as shown.

14-inch, 4 blades, 3 spiders. Wgt., 39 lbs.....Each, **$16.70**
16 inch, 4 blades, 3 spiders. Wgt., 41 lbs.....Each, **$17.40**
18-inch, 4 blades, 4 spiders. Wgt., 44 lbs.....Each, **$18.00**

NEW STOWE PLAIN BEARING



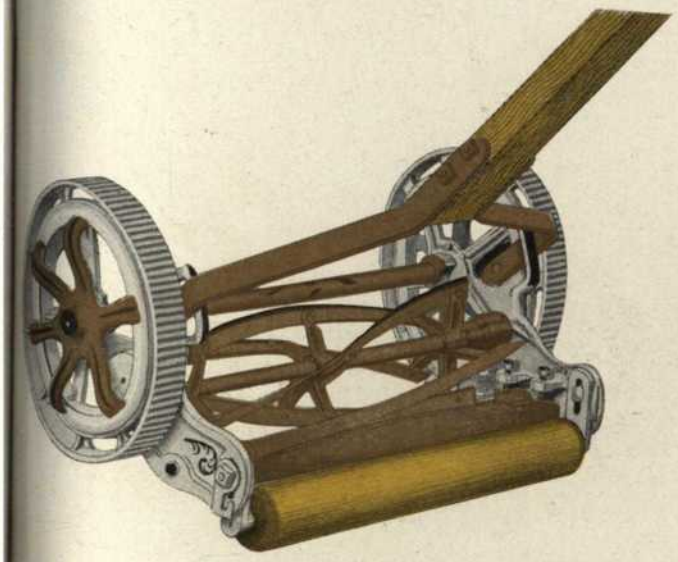
This machine is not ball bearing, but the plain bearings on the reel shaft are made adjustable for taking up wear. 8½-inch wheels, 5½ inch reel, 3 blades. Double screw adjusting cutter bar. Finished in colors as shown.

14-inch, 3 blades, 3 spiders. Wgt., 38 lbs.....Each, **$12.60**
16-inch, 3 blades, 3 spiders. Wgt., 41 lbs.....Each, **$13.30**

Weights shown are for Mowers boxed for shipment and are approximate.

Lawn Mowers—Continued

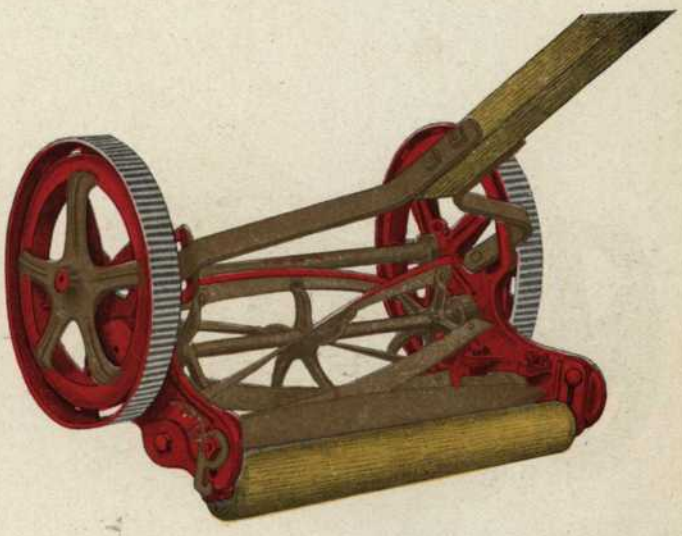
DIAMOND SPECIAL (W & B) BALL BEARING



Equipped with self-adjusting ball bearings on reel as illustrated on page 508. 11-inch wheels, 6-inch reel, 5 blades. Double screw adjusting cutter bar. Finished in colors as shown.

14-inch, 5 blades, 3 spiders. Wgt., 55 lbs.....Each, **$26.00**
16-inch, 5 blades, 3 spiders. Wgt., 60 lbs.....Each, **$27.50**
18-inch, 5 blades, 4 spiders. Wgt., 65 lbs.....Each, **$29.00**
20-inch, 5 blades, 4 spiders. Wgt., 70 lbs.....Each, **$30.20**

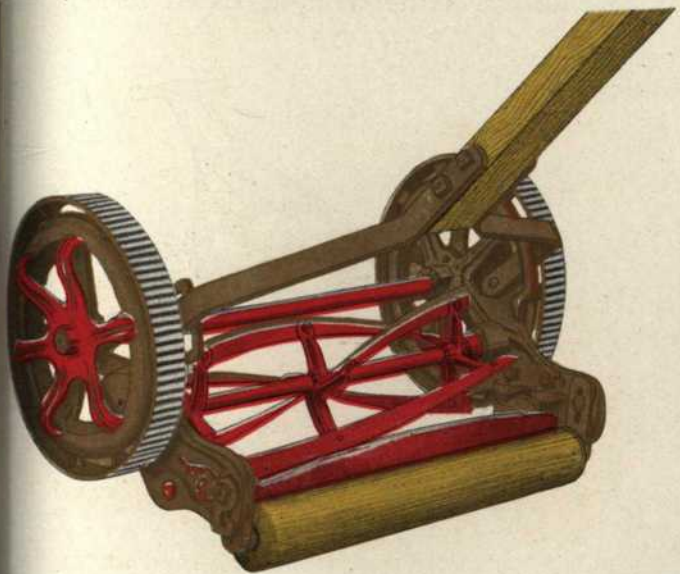
JUNIOR SPECIAL (W & B) BALL BEARING



Equipped with self-adjusting ball bearings on reel as illustrated on page 508. 10-inch wheels, 6-inch reel, 5 blades. Double screw adjusting cutter bar. Can be adjusted very close to the ground. Finished in colors as shown.

14-inch, 5 blades, 3 spiders. Wgt., 55 lbs.....Each, **$22.80**
16-inch, 5 blades, 3 spiders. Wgt., 59 lbs.....Each, **$23.80**
18-inch, 5 blades, 4 spiders. Wgt., 62 lbs.....Each, **$25.00**
20-inch, 5 blades, 4 spiders. Wgt., 65 lbs.....Each, **$26.20**

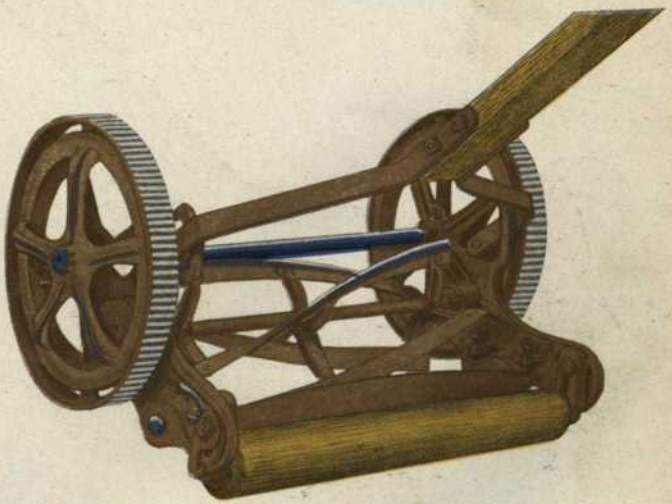
DIAMOND (W & B) BALL BEARING



Equipped with self-adjusting ball bearings on reel as illustrated on page 508. 11-inch wheels, 6-inch reel, 4 blades. Double screw adjusting cutter bar. Finished in colors as shown.

14-inch, 4 blades, 3 spiders. Wgt., 60 lbs.....Each, **$23.80**
16-inch, 4 blades, 3 spiders. Wgt., 64 lbs.....Each, **$25.20**
18 inch, 4 blades, 4 spiders. Wgt., 66 lbs.....Each, **$26.50**

JUNIOR (W & B) BALL BEARING



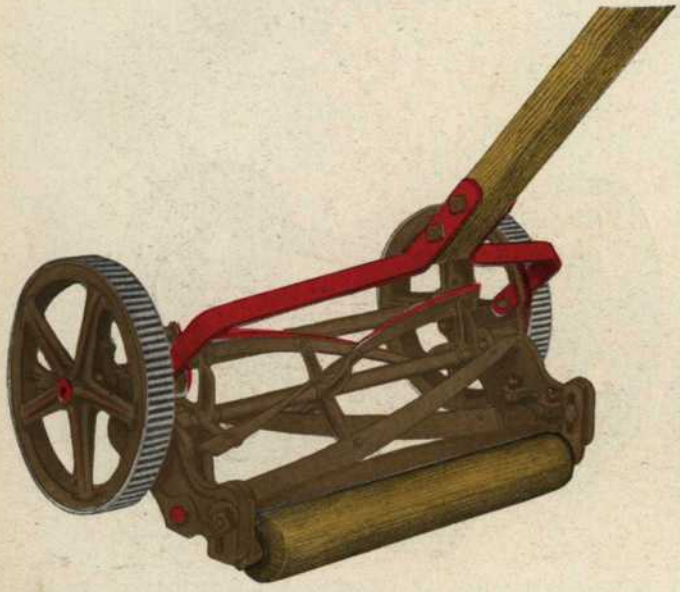
Equipped with self-adjusting ball bearings on reel as illustrated on page 508. 10-inch wheels, 6-inch reel, 4 blades. Double screw adjusting cutter bar. Can be adjusted very close to the ground. Finished in colors as shown.

14-inch, 4 blades, 3 spiders. Wgt., 53 lbs.....Each, **$21.70**
16-inch, 4 blades, 3 spiders. Wgt., 56 lbs.....Each, **$22.70**
18-inch, 4 blades, 4 spiders. Wgt., 60 lbs.....Each, **$23.60**

Weights shown are for Mowers boxed for shipment and are approximate.

Lawn Mowers—Continued

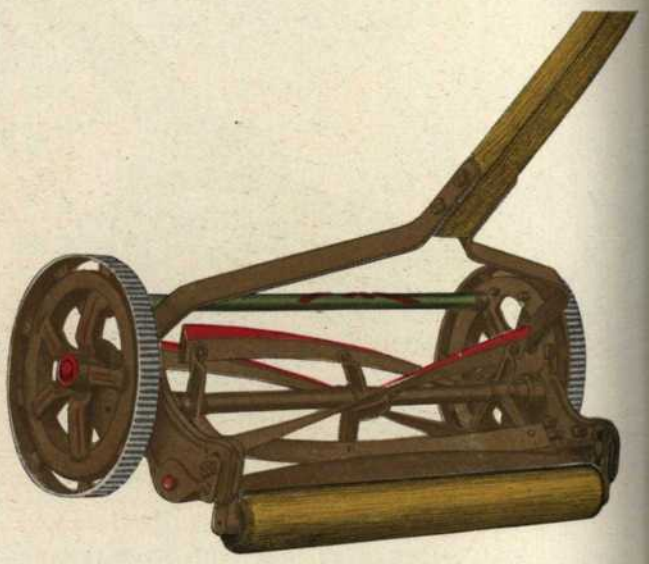
ELECTRIC (W & B) BALL BEARING



Equipped with self-adjusting ball bearings on reel as illustrated on page 508. 9-inch wheels, 5¾-inch reel, 4 blades. Double screw adjusting cutter bar. Finished in colors as shown.

14-inch, 4 blades, 3 spiders. Wgt., 46 lbs.....Each, **$19.20**
16-inch, 4 blades, 3 spiders. Wgt., 49 lbs.....Each, **$19.90**
18-inch, 4 blades, 4 spiders. Wgt., 52 lbs.....Each, **$20.60**

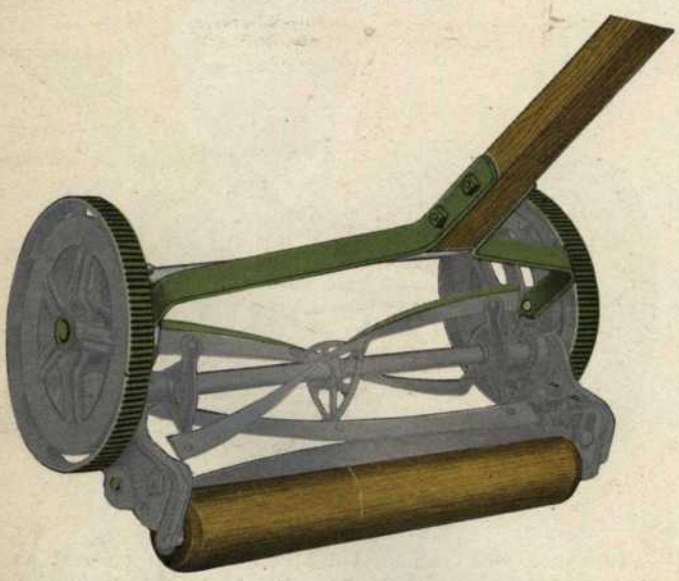
WESTERN (W & B) BALL BEARING



Equipped with self-adjusting ball bearings on reel as illustrated on page 508. 8¼-inch wheels, 5½-inch reel, 4 blades. Double screw adjusting cutter bar. Finished in colors as shown.

14-inch, 4 blades, 3 spiders. Wgt., 38 lbs.....Each, **$16.70**
16-inch, 4 blades, 3 spiders. Wgt., 40 lbs.....Each, **$17.40**
18-inch, 4 blades, 4 spiders. Wgt., 46 lbs.....Each, **$18.00**

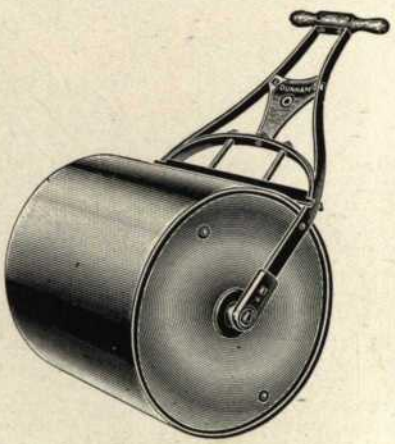
LITTLE SHAVER (W & B) PLAIN BEARING



This machine is not ball bearing, but the plain bearings on the reel shaft are made adjustable for taking up wear. 8¼-inch wheels, 4¾-inch reel, 3 blades. Double screw adjusting cutter bar. Finished in colors as shown.

14-inch, 3 blades, 3 spiders. Wgt., 38 lbs.....Each, **$12.60**
16-inch, 3 blades, 3 spiders. Wgt., 41 lbs.....Each, **$13.30**

Dunham Water-Weight Lawn Rollers



An electric welded steel drum which can be filled with either sand or water to add the necessary weight. Painted green on the body and ends, with red handles.

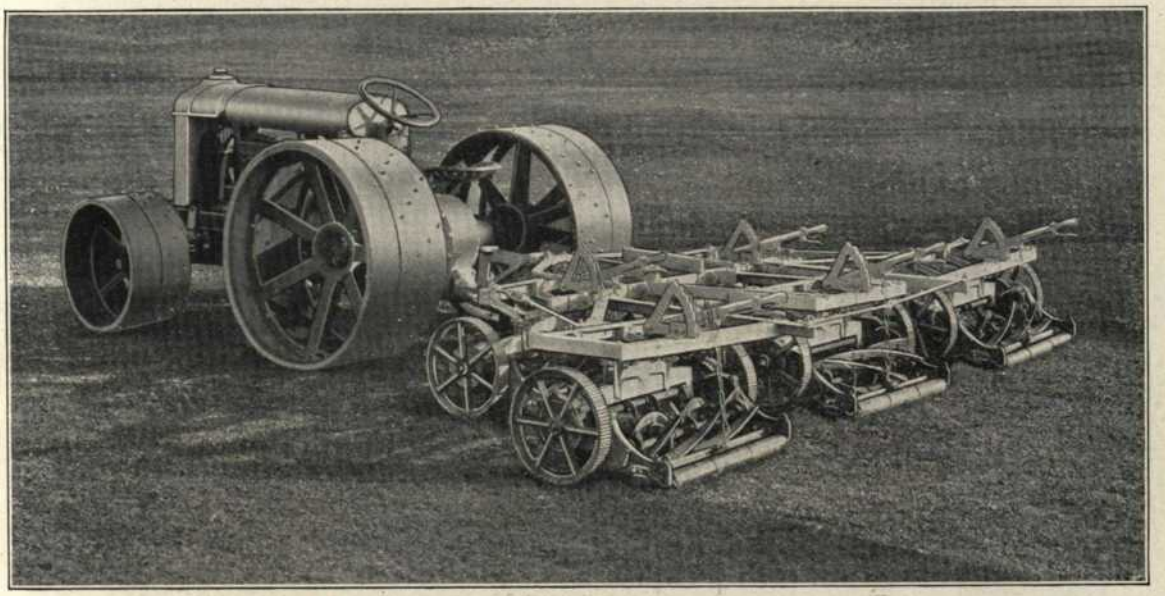
No.	Dia. Ins.	Lgth. Ins.	Wgt. Empty	Filled With Water	Each
3	14	20	46 lbs	148 lbs	18.50
5	18	24	76 lbs	274 lbs	22.25
7	24	24	95 lbs	418 lbs	25.75
9	24	32	116 lbs	575 lbs	28.00

Weights shown are for Mowers boxed for shipment and are approximate.

The Fordson Titan Quintet Mower

From Factory, Richmond, Ind.

A "Fleet" of Five Titan Lawn Mowers with a Cutting Width of Twelve Feet.



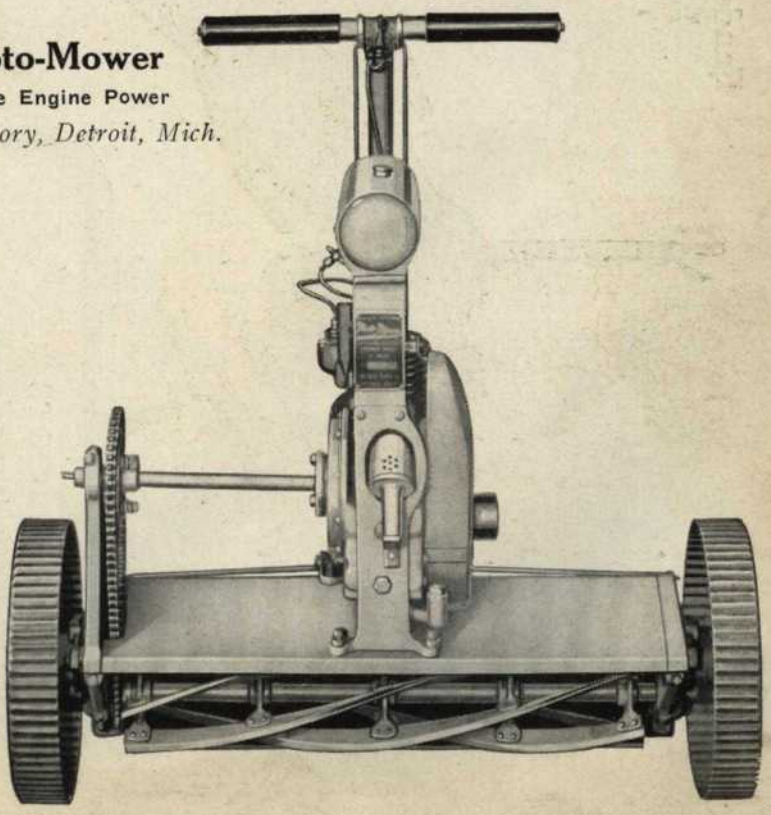
There has long been a demand for a reliable outfit of Lawn Mowers working in gangs to be used in parks and on the grounds of Country Clubs and private estates. The Fordson Titan Quintet has been designed for use in conjunction with the Fordson Tractor whereby the Fordson draws five 30-inch Titan Mowers, giving a cutting width of twelve feet. The Titan Cutting Units are 30 inches in width, 17-inch Drive Wheels with Heavy Duty Hyatt Roller Bearings, 8-inch revolving cylinder with five crucible steel blades. Patented Cutter Bar Adjustment. Triple gears on both sides, extra long wheel base. Self-adjusting Timken Roller Bearings on reel. Equipped with automatic shift to throw mower in and out of gear. Three-section heavy iron roller, lubricated the entire length. Cuts easily 75 to 100 acres a day. The frame is all steel, guaranteed unbreakable, and is very flexible to conform to the contour of uneven ground. Will take any grade. Easily steered and can be completely turned in an extremely small space, just as short as tractor would turn without an attachment. The two rear outside mowers may be detached by releasing a single pin when necessary for passing through narrow gateway or bridge. The Fordson should be equipped with special lawn wheels, which can be purchased through any authorized Ford dealer.

Fordson Quintet complete with 5 Titan Units and Frame. No Tractor included. Weight, 1840 lbs.....Each, **$1020.00**
Single Titan Units furnished separately. Weight, 260 lbs.....Each, **$ 180.00**
Quintet Frame only furnished separately. Weight, 540 lbs.....Each, **$ 220.00**

Moto-Mower

Gasoline Engine Power

From Factory, Detroit, Mich.



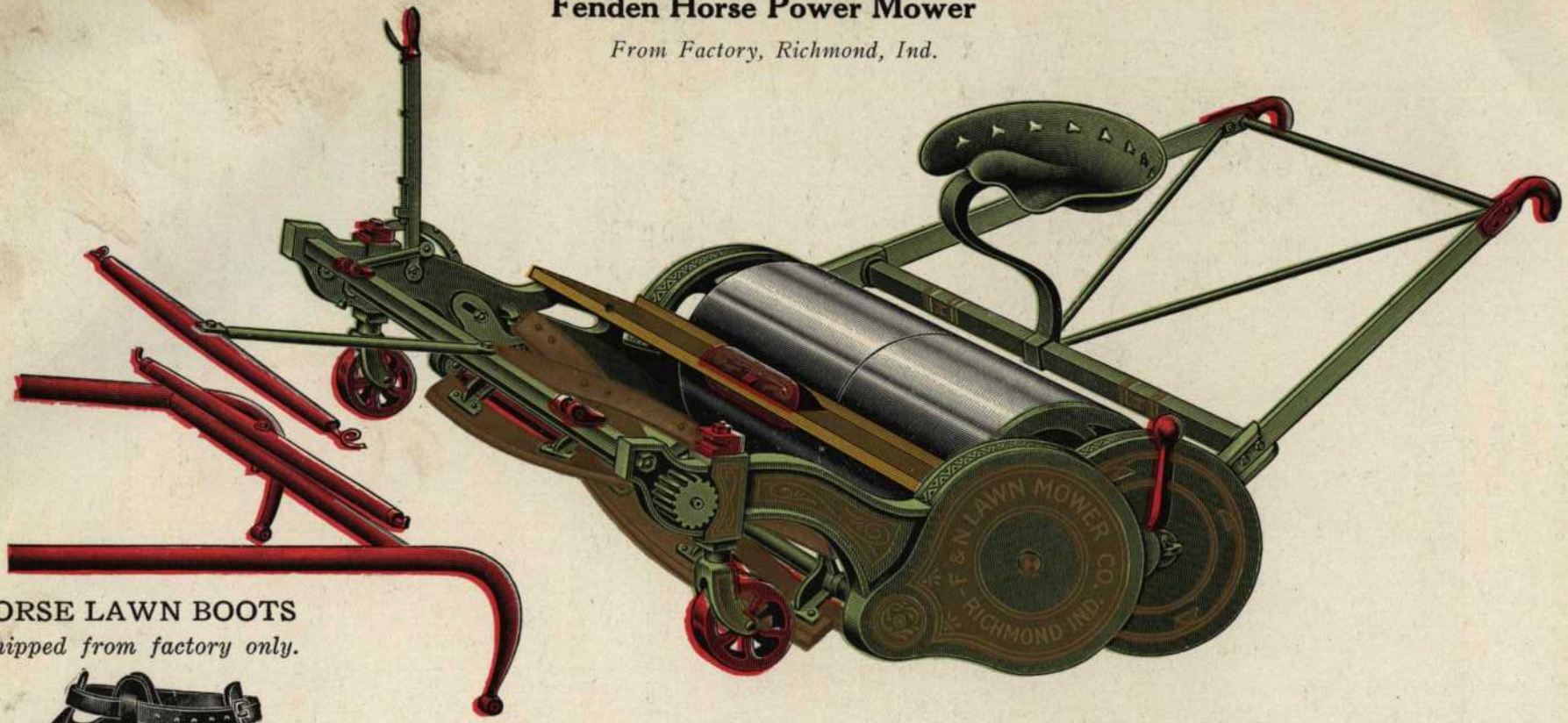
The Moto-Mower is a simple, compactly designed, moderately priced power Lawn Mower; light enough to be easily run up and down over terraces; small enough to cut close to trees, hedges and flower beds; economical in gasoline and maintenance, and so near fool-proof that almost anyone can run it without danger of its getting out of order. Cuts evenly and cleanly on the roughest lawns. It starts, stops and turns in any direction under its own power by the mere rotation of two rubber grips on the handle. The Moto-Mower will cut as much grass in a day as five men with hand mowers. Extreme simplicity, together with the great ease and flexibility with which the motor operates makes mechanical knowledge unnecessary. Practically the entire mower unit is made of malleable iron and steel. Light weight means low maintenance and small gas consumption. The engine is 4 cycle, valve in the head, and will develop 2½ horse power, with a speed of 600 to 2,000 R. P. M., which gives it an abundance of reserve, even when the machine is put to the hardest tests. The crank and cam shafts are made of chrome nickel steel.

Cutting width, 27 inches. Five blades. Cutting speed, ½ to 3½ miles per hour. Capacity, 4 to 5 acres per day. Climbs 35% grade. Requires about one gallon of gasoline per day. Painted gray enamel.

Moto-Mower, complete, weight 265 lbs..Each, **$520.00**

Fenden Horse Power Mower

From Factory, Richmond, Ind.



HORSE LAWN BOOTS

Shipped from factory only.

For Use On
Golf Links, Tennis Courts and Fine Lawns.

The sole is hardened, filled with steel rivets and made water-proof. The construction is entirely with rivets—no stitching whatever. Fastened to the horse's foot, not to the ankle, giving free action and no chafing.

No. 2 boot measures inside (extreme width), 5½ in. Correct size for No. 2 horseshoe.
No. 4 boot measures inside (extreme width), 6½ in. Correct size for No. 4 horseshoe.
No. 6 boot measures inside (extreme width), 7 in. Correct size for No. 6 horseshoe.
No. 4 size generally used.
Prices on application.

One of the best Horse Power Mowers on the market. The frame construction is the strongest that is possible to build and is reinforced at each end with heavy steel bars. All parts accurately machined and fitted. Equipped with the only graduated raising and lowering device, enabling the operator to instantly adjust the cutting height or allow the knives to pass over a stone.

Both the bottom knife and the reel are demountable without disturbing the frame of the mower. Reel bearings turn in adjustable split brass bushings. Four revolving blades, $\frac{5}{16}$ of an inch in thickness and made of the best knife steel obtainable, vanadium-crucible analysis, oil tempered. Double-riveted malleable reel braces throughout.

Fitted with a train of three gears and durable triple pawl ratchets. Diameter of drive rollers, 15 inches. Reel is 8 inches in diameter and is quickly adjusted to the stationary or bottom knife. The adjusting screws are easily accessible and seldom require attention.

If desired, this mower can be furnished with five revolving blades and bottom knife with upturned edge or lip, at an extra cost.

Furnished in 30-in., 35-in., or 40-in. cut. Fully equipped with driver's seat, shaft and side-draft attachments. Complete with shafts, 30-inch weighs 790 lbs.; 35-inch, 840 lbs., and 40-inch, 890 lbs.

30-inch	Each, $247.00
35-inch	Each, $260.00
40-inch	Each, $273.00

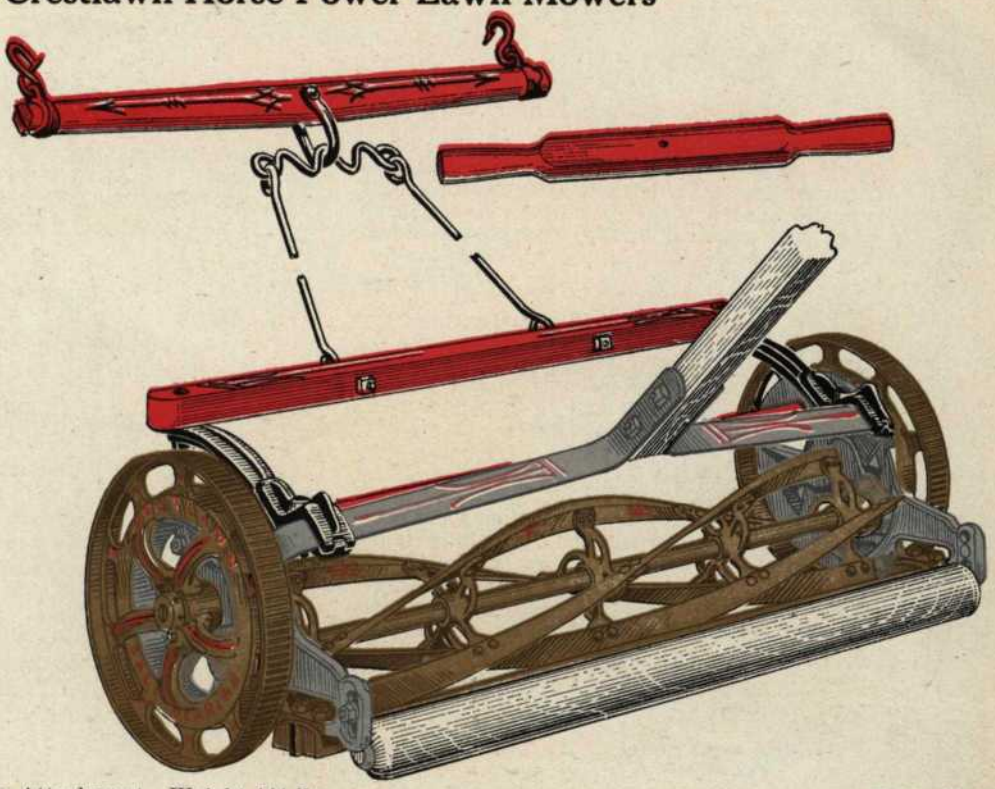
Crestlawn Horse Power Lawn Mowers

Has Ball Bearing Drive Wheels 11 inches high. Plain bearing, self-sharpening reel 6 inches in diameter, revolves in long, heavy brass bushing. Width of cut, 30 inches. Four revolving blades. Interlocking cutter bar. Always in adjustment.

Pony mowers are often used by hand power and the Crestlawn is particularly good for this purpose, as it has Ball Bearing Drive Wheels. This makes the machine easy running and very little harder to operate than many hand machines. Each machine has an extra handle as illustrated, so where desired a man can pull this mower in place of a horse.

Patent horse attachment is so connected that the mower does not tip up. This attachment also permits the horse to walk on either side or in the middle and yet maintain an equal and central draft. Finished in colors as shown.

Packed complete in a box.

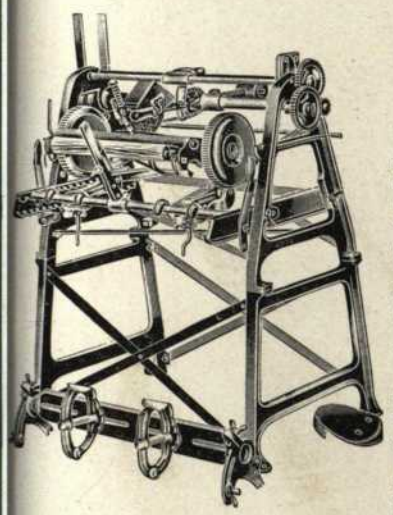


30-inch cut, complete with Horse Attachment. Weight 144 lbs.....Each, **$60.00**

The Ideal Lawn Mower Grinder

From Factory Only, Plymouth, Ohio.

Suitable also for Sharpening Skates, Small Tools, etc.



Japanned Cast Angle Iron Frame full steel braced; Adjustable Carriage and Large Sprocket Wheel. The Main Shaft and Grinding Wheel are ball bearing and self-aligning. The Carborundum Wheel is mounted on a ball bearing hub, which moves along the shaft. The arm is pushed along by a screw shaft and is also counter-balanced by a weight at the back of the machine. Has a Belt Shifter and Brake for stopping machine quickly. A Sharpening Attachment, which grinds skates concave, is also included. The Feed can be stopped at any point, being thrown in and out by means of a trip lever, which throws the feed nut in mesh with screw shaft. Adjustable Supports controlled by adjusting screws make the Grinding Wheel cut equally at both ends of the Mower. They allow the Wheels to turn, which prevents the Ratchets of the Wheels interfering and also holds the Mower securely.

Driving Shaft is 1¼ inches; Grinding Wheel is 5 inches in diameter with ⅝-inch face, and is driven by a ⅜-inch Bicycle Chain from Main Shaft. Adjustable Hood over Grinding Wheel protects machine from emery dust. Length over all 44 inches; width at base 18 inches; height from floor to center of main shaft 36 inches; height over all 53 inches. Can be used for Mowers up to 24 inches. Regularly furnished with 1⅜x4-inch tight and loose belt pulleys and gear drive. We can also furnish with large hand wheel in place of gear drive as illustrated, and with balance wheel in place of the belt pulleys, when so ordered. Packed 1 in a crate.

No. 4B—Power; with Tight and Loose Belt Pulleys. Weight each 215 lbs.....Each, 160.00
No. 3B—Hand; with Balance Wheel Weight each 215 lbs.....Each, 160.00

Clover Lawn Mower Sharpening Compound

Simply apply the Compound the entire length of each rotary blade of the lawn mower; push the mower forward and back a dozen times, grinding them sharp against the stationary blade; wipe off the compound and it should cut newspaper like sharp shears. One can will sharpen a mower about ten times. Packed 1 dozen cans in a box with an attractive display card.

No. 5X. . . . .Per doz. cans, **$8.40**

No. 2 Planet Junior Grass Edger

A well kept lawn must have the edges neatly trimmed at all times, and the No. 2 Edger does this easily and quickly. It keeps the grass bordering all walks nicely edged, whether the walks are straight or curved. It is a specialized tool, made with steel blade and cast hub which rides on the walk, driving the cutting blade. The cutting blade can be sharpened when necessary. The price of this tool is very moderate and a Planet Jr. No. 2 Grass Edger should be sold with every Lawn Mower and to all having occasion to use a Lawn Mower.

No. 2.....Each, **$3.00**

Grass Hooks

No. 1 Big Indian

This Grass Hook has a tempered and polished steel blade 12 inches long. Heavy aluminum bronzed malleable shank. Corrugated green enamel handle. Just the right hang to make easy and efficient work. Weight per dozen 12 lbs.

No. 1.....Per doz., $12.00

Packed 1 dozen in a carton.

No. 3 Village Blacksmith

Forged from bar tool steel. Hangs perfectly without muscular effort. Carefully tempered, it comes sharp and stays sharp. Blade is polished and handle is varnished. The blade is offset to prevent hand striking the ground. Weight per dozen 10 lbs.

No. 3.....Per doz., $11.00

Packed 1 dozen in a box.

No. 4 Village Blacksmith

Made from cutlery steel; corrugated tempered blade, ground wide, thin and sharp. Riveted handle. Weight per dozen 6 lbs.

No. 4.....Per doz., $9.00

Packed 1 dozen in a box.

No. 420 Gypsy

The Gypsy Grass Hook has detachable steel blade, natural finish; cutting edge polished; shank finished black and shaped to keep hand from striking ground. Weight per dozen, 9 lbs.

No. 420.....Per doz., $9.00

Packed 1 dozen in a carton.

No. 3005 Kelly "Hand Made"

Natural black forge finish. Cutting edge polished and sharpened. The blade is offset to prevent hand striking the ground. Oak stained Hickory Handle. Weight per dozen 9 lbs.

No. 3005.....Per doz., $8.80

Packed 1 dozen in a carton.

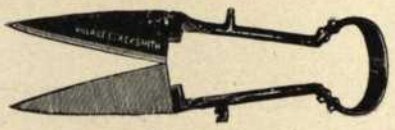
Grass Shears

Polished blades and handles. Bent blades, swaged. Weight per dozen, 12 lbs.

No. 530—5½-inch blades.....Per doz., $10.50

Packed ½ dozen in a carton.

Grass Shears

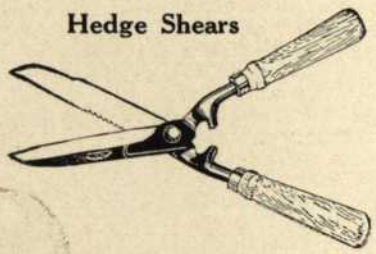


Mill finished Blades. Soft Cast Handles, green japanned. Handsome appearance. Weight per doz. 11 lbs.

No. V5—5-inch blades.....$9.00

Packed 1 dozen in a carton.

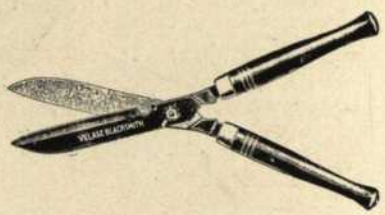
Hedge Shears



Special light weight 6-inch Hedge Shears with serrated edge. Best grade forged cutlery steel. Special design and offset. Hammer finish. 14½ inches long over all. Weight each 1½ lbs.

No. 660—6-inch.....Each, $3.00

Packed 1 dozen in a carton.



Forged crucible steel blade 7½ inches long. Notched. Hammer finish. Hardwood handles secured to blades with countersunk rivets. 22 inches long over all. Will not come loose. Weight each 3½ lbs.

No. 800—8 inch.....Each, $3.50

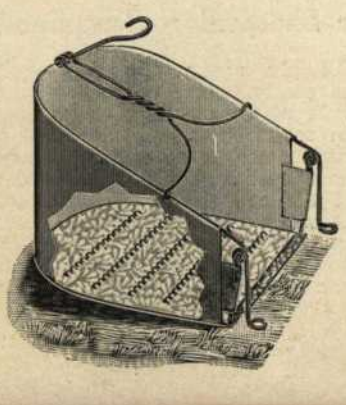
Packed 1 dozen in a carton.

Grass Catchers

Fits any make of lawn mower 12 to 18 inches wide. Galvanized sheet metal bottom, heavy duck sides. Projection in the bottom prevents grass from slipping forward while mowing. 17 inches deep, 18 inches wide. Weight per doz., 50 lbs.

No. 5G..Per doz., $25.50

1 dozen in a carton.



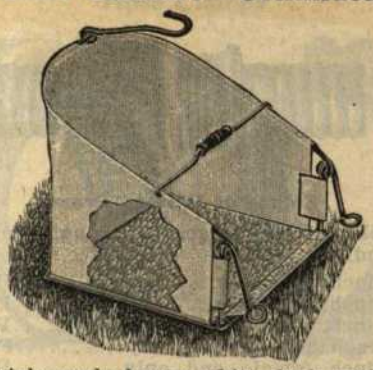
Fits any lawn mowers 12 to 18 inches wide.

Made of heavy white duck with galvanized bottom. Round back. Sides are firmly fastened to bottom. Projections in the bottom prevent grass from slipping forward while mowing. 20 inches deep and 18 inches wide. Weight per doz. 50 lbs.

No. 10G. Per doz., $29.10

1 dozen in a carton.

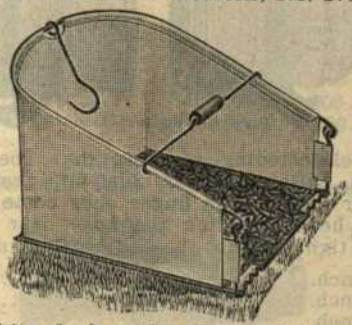
Grass Catchers—Continued



Made of high grade heavy white duck with galvanized bottom having a square back. Central handles gives balanced grip and permits carrying with one hand when filled. 16½ inches deep. No. 26G is 16 inches wide and fits 12 to 16 inch mowers. Weight per dozen, 40 lbs. No. 27G is 20 inches wide and fits 16 to 20 inch mowers. Weight per dozen, 48 lbs.

No. 26G. . . . . Per doz., $22.90
No. 27G. . . . . Per doz., $26.00

No. 26G packed 1 dozen in a carton; No. 27G ½ dozen.



Made of white duck with galvanized bottom having a square back. Central handle gives a balanced grip and permits carrying with one hand when filled. 17 inches deep, 20 inches wide. Fits 12 to 17-inch mowers. Weight per dozen 40 lbs.

No. 201. . . . . Per doz., $19.60

Packed 1 dozen in a carton.

Made of fine quality white canvas; heavy galvanized wire frame. Adjustable steel hooks will fit any mower made from 12 to 16-inch, and always in position to receive catcher. Weight per dozen, 20 lbs.

No. 110. . . . . Per doz., $18.00

Packed 1 dozen in a carton.

Lawn Sprinklers

Ring Fountain Sprinkler.

Heavy brass throughout. No moving parts. Simple, durable, easy to operate. Diameter 8½ inches. Most beautiful in operation. Weight per dozen, 12 lbs.

No. 8. . . . . Per doz., $14.40

Packed six in display carton.

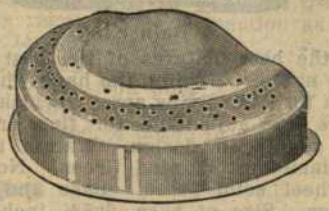
Lawn Sprinklers—Continued

Crescent Fountain

Heavy brass throughout. No moving parts. Its construction permits changing position without shutting off, as it throws spray to the front and sides. Base 8½ inches wide. Will not tip over. Weight per dozen, 10 lbs.

No. 11. . . . . Per doz., $13.60

Packed six in display carton.

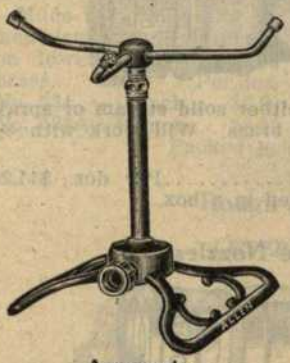


Handy Fountain

Throws all of the water to front and sides, giving a beautiful fountain spray. Handy, as can be adjusted while water is turned on. Top heavy brass, with galvanized steel bottom. 5 inches wide. Highly finished. Weight per dozen, 5 lbs.

No. H96374. . . . . Per doz., $5.50

Packed six in display carton.



Anaconda.

A revolving sprinkler in which friction has been eliminated as far as possible without the use of a ball bearing head. Has a ground joint bearing which reduces leakage to a minimum. Well adapted for general use. Polished brass head and 5-in. arms, red painted stem, black japanned base, 8x8 inches, with loose swivel connection, height 10 inches. Weight each 2¾ lbs.

No. 244. . . . . Per doz., $33.00

Packed one in a carton.

Designed to run easily even with low water pressure. It is one of the most satisfactory types of sprinkler heads, because of its simplicity. Polished brass head and 5½-in. arms, 8x8 in. black japanned base with ¾-in. loose swivel connection, height 6½ in., wt. each 3¼ lbs.

No. 49. . . . . Per doz., $30.00

Packed one in a carton.

Preston.

Busy.

An efficient and justly popular sprinkler. Will sprinkle uniformly over a circle 30 feet in diameter under 35 lbs. pressure. Galvanized Blake head, black japanned base, height 7 in., wt. each 2¼ lbs.

No. 51. . . . . Per doz., $14.40

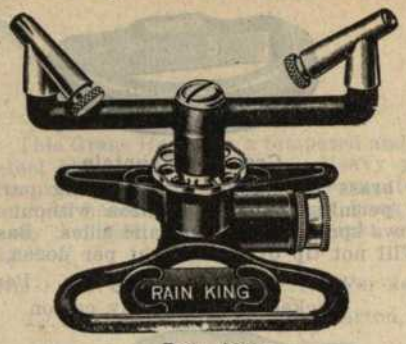
Packed one in a carton.

Very practical and satisfactory in operation. Cannot choke or clog if there is sand or sediment in the water. Black japanned finish, height 1½ in., diameter 4 in., wt. per doz., 15½ lbs. Packed bulk.

No. 54. . . . . Per doz., $6.60

"C. B. G."

Lawn Sprinklers—Continued



Rain King

Combines the best features of the best sprinklers and the best hose nozzle. Turning the hand wheel releases the sprinkler arm for a revolving spray, or locks for stationary use. Nozzles are adjustable for fine or coarse spray. Sturdy and simple in design. Waters a circle up to 70 feet in diameter. Painted Green. Nozzles, bushings and hand wheel solid brass. Base and sprinkler arm heavy castings. Size of base, 6x5¾ inches; height, 5½ inches. Weight, 2¼ lbs.

No. R36.....Each, $5.00

Packed one in a carton.

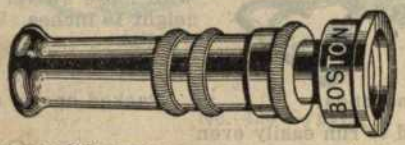
Diamond Hose Nozzles.

Can be graduated to throw either solid stream or spray, or shut off entirely. Made of brass. Will work with ½, ⅝ or ¾-inch hose.

No. 17.....Per doz., $11.20

Packed one dozen in a box.

Boston Hose Nozzles



Will throw solid stream or spray, or shut off entirely. Made of brass. Will work with ½, ⅝ or ¾-inch hose.

No. B9619.....Per doz., $12.70

Packed 1 dozen in a box.

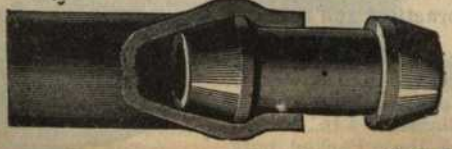
Sherman Hose Nozzles.

Throws solid stream or spray. Made of brass. Will work with ½, ⅝ or ¾-inch hose.

No. 23.....Per doz., $20.40

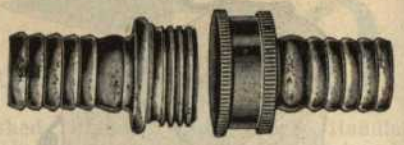
Packed one-half dozen in a box.

Wood Hose Menders.



¾-inch.....Per doz., $0.50

Pressed Brass Hose Couplings.



Made of Pressed Brass.

The double knurled flanges on the nut afford a fine grip for the hand.

No. 41—½-inch, complete.....Per doz., $2.60
No. 42—⅝-inch, complete.....Per doz., $2.60
No. 43—¾-inch, complete.....Per doz., $2.60
No. 44—½-inch, female end only.....Per doz., $2.00
No. 45—⅝-inch, female end only.....Per doz., $2.00
No. 46—¾-inch, female end only.....Per doz., $2.00

Packed one dozen in a box.

Perfect Clincher Hose Couplings.

A self-fastening coupling that does not require extra bands, bolts or wires. Just slip them in the hose and hammer down. The finger ends come down directly behind the head, buckling the hose over the head and clamping it tight against the body of the tube.

No. 22—½-inch.....Per doz., $4.70
No. 24—⅝-inch.....Per doz., $4.70
No. 26—¾-inch.....Per doz., $4.70

Packed one dozen in a box.

Perfect Clincher Hose Menders

A one-piece article which does the work of the mender tube and two clamps such as ordinarily used. A smooth mend with no projecting parts. A solid joint which cannot pull apart. Requires just one tool—a hammer.

It grips the hose both inside and out.

½-inch.....Per doz., $1.80
⅝-inch.....Per doz., $1.80
¾-inch.....Per doz., $1.80

Packed two dozen in a box.

Iron Hose Menders.

Can be slipped in old hose without loosening inside tube, and the heavy corrugations prevent pulling out. Fastened in hose with either clamps or wire bands.

½-inch size.....Per doz., $1.20
⅝-inch size.....Per doz., $1.50
¾-inch size.....Per doz., $1.60

Hose Clamps

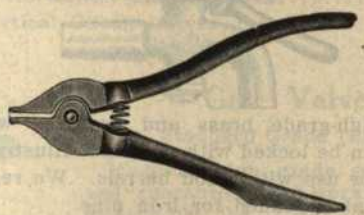
Above cut illustrates Brass Clamps.

Above cut illustrates 2-inch size for Thresher hose.

Our Hose Clamps are the best made, and cannot fail to give satisfaction. Furnished in either galvanized or brass for ½ to ¾-inch hose. 2-inch size is made in two-piece pattern especially for thresher hose.

	Galvanized	Brass
½-inch	Per dozen, $0.50	$0.80
⅝-inch	Per dozen, $0.60	$0.80
¾-inch	Per dozen, $0.60	$0.80
1 -inch	Per dozen, $1.20	.....
1¼-inch	Per dozen, $2.10	.....
1½-inch	Per dozen, $3.00	.....
2 -inch (for Thresher Hose)	Per dozen, $4.00	.....

Caldwell Hose Wires and Pliers.



Wires for ½, ⅝ and ¾-inch hose.....Per dozen, $0.60
No. 6½—Pliers, 6½ inches long.....Per dozen, $6.00

Good Luck Hose Washers

Stay soft and hold firmly in place. Packed 1 dozen in carton, 24 cartons (2 gross) in an attractive counter display, 6 containers (12 gross) in a shipping case.

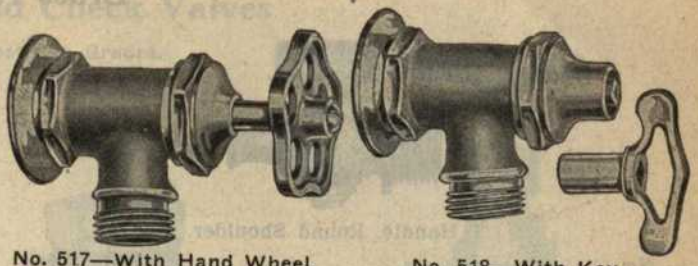
Good Luck Hose Washers.....Per Gro., $1.20

Hose Washers in Bulk

We can also furnish Rubber Hose Washers in bulk for those who prefer to buy in that way.

Per dozen.....$0.11
Per lb.....$1.00

Sill Cocks



No. 517—With Hand Wheel. No. 518—With Key.

Nickel plated, rough body, semi-finished trimmings. Very strong and has regular hose connection as shown.

No. 517 —For ½-inch iron pipe .....Each, 1.70
No. 517A—For ¾-inch iron pipe .....Each, 1.70
No. 518 —For ½-inch iron pipe .....Each, 1.70
No. 518A—For ¾-inch iron pipe .....Each, 1.70

Packed ½ dozen in a box.

Bibbs

Made in both ½ and ¾-inch sizes with hose thread on lower end. Finished brass.

	Per doz.
No. 531 —½-inch...	22.80
No. 531A—¾-inch...	28.20

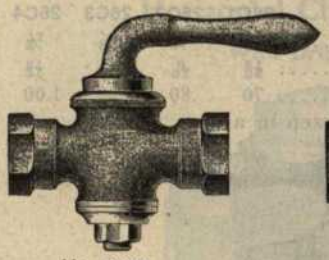
Made in both ½ and ¾-sizes. Finished brass.

	Per doz.
No. 530 —½-inch...	19.80
No. 530A—¾-inch...	25.20

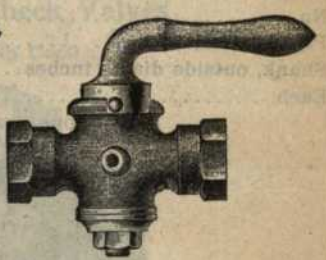
Packed ½ dozen in a box.

Rough Stop Cocks

LEVER HANDLE.



No. 3968.

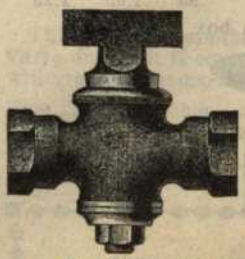


No. 3969.

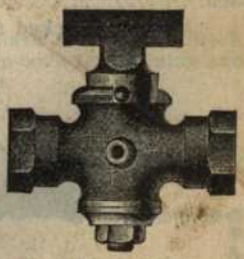
Flat way for Iron Pipe. Rough finish Brass.

Pipe thread, size ins.....	½	¾	1	1¼
Inside diameter of thread, ins....	¾	⅞	1 1/16	1½
No. 3968—Plain .....Per doz.,	21.00	36.00	52.80	89.40
No. 3969—Waste outlet. Per doz.,	21.60	36.60	54.00	91.20

T HANDLE



No. 3954.

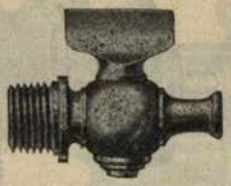


No. 3955.

Flat way for Iron Pipe. Rough finish Brass.

Pipe thread, size ins.....	½	¾	1	1¼
Inside diameter of thread, ins....	¾	⅞	1 1/16	1½
No. 3954—Plain. .....Per doz.,	21.00	36.00	52.80	89.40
No. 3955—Waste outlet. Per doz.,	21.60	36.60	54.00	91.20

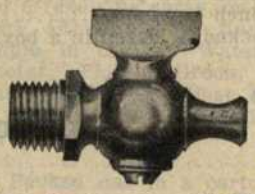
Brass Air Cocks



T Handle, Round Shoulder.

No.	6C1	6C2
Pipe thread, inches	⅛	¼
Shank, outside diam., inches	13/32	9/16
Each	.40	.45

Packed one dozen in a box.



T Handle, Hexagon Shoulder.

No.	50C1	50C2	50C3	50C4
Pipe thread, inches	⅛	¼	⅜	½
Shank, outside diam., inches	13/32	9/16	11/16	13/16
Each	.45	.50	.55	.60

Packed one dozen in a box.

T Handle, Hexagon Shoulder.

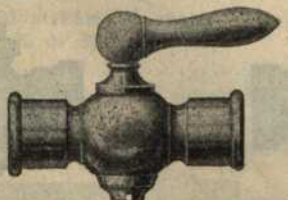
No.	26C1	26C2	26C3	26C4
Pipe thread, inches	⅛	¼	⅜	½
Shank, outside diam., inches	13/32	9/16	11/16	13/16
Each	.70	.80	.90	1.00

Packed one dozen in a box.

Lever Handle, Hexagon Shoulder.

No.	29C1	29C2	29C3	29C4
Pipe thread, inches	⅛	¼	⅜	½
Shank, outside diam., inches	13/32	9/16	11/16	13/16
Each	.85	.95	1.05	1.15

Packed one dozen in a box.



Lever Handle, Double Female.

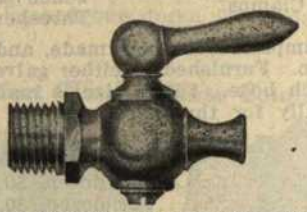
No.	43C1	43C2	43C3	43C4
Pipe thread, inches	⅛	¼	⅜	½
Shank, outside diam., inches	13/32	9/16	11/16	13/16
Each	.80	.85	1.00	1.25

Packed one dozen in a box.

Lever Handle, Round Shoulder.

No.	12C1	12C2
Pipe thread, inches	⅛	¼
Shank, outside diam., inches	13/32	9/16
Each	.55	.60

Packed one dozen in a box.



Lever Handle, Hexagon Shoulder.

No.	52C1	52C2	52C3	52C4
Pipe thread, inches	⅛	¼	⅜	½
Shank, outside diam., inches	13/32	9/16	11/16	13/16
Each	.60	.65	.70	.75

Packed one dozen in a box.

Brass Lock Lever Faucets

Threaded for Iron Pipe

Made of high-grade brass and provided with hinged handle that can be locked with padlock. Illustration shows plain shank for use with wood barrels. We regularly furnish with shank threaded for iron pipe.

Size, inch	½	*⅝	¾	1	1¼	1½	2
Each	$1.20	$1.50	$2.00	$2.80	$6.00	$7.30	$12.40

*⅝-inch has ¾-inch flange connection.

Packed ½ dozen in a box.

Oil and Molasses Gates

Scoville Pattern.

Made either with wood thread having tapered shank, or iron pipe thread with straight shank. Orders must specify which thread is wanted. Japanned finish.

	Wood Thread	Iron Pipe Thread
½-inch	Per doz., 15.00	16.50
¾-inch	Per doz., 15.50	17.00
1 -inch	Per doz., 16.00	17.60
1¼-inch	Per doz., 18.50	20.35
1½-inch	Per doz., 22.00	24.20
2 -inch	Per doz., 30.00	33.00

Packed ½ dozen in a box.

Globe, Angle and Check Valves

Standard and Competition Grades.

No. 107 Globe.

No. 114. Horizontal Check.

No. 118. Vertical Check.

No. 108 Angle.

Standard Grade (Light).

Made of good grade steam bronze and recommended for working pressures up to 100 lbs. Malleable iron non-heating hand wheel is green enameled. Trimmings are nicely finished. Body is rough.

Competition Grade.

Made of good grade steam bronze and is very good for ordinary work or on low pressures. Malleable iron non-heating hand wheel is green enameled.

Pipe is measured on the inside. That is, what is regularly known as ½ inch pipe has ½ inch hole but measures ¾ inch outside diameter. Other sizes accordingly.

Pipe Thread size, ins.		¼	⅜	½	¾	1	1¼	1½	2
Outside diameter of pipe, ins.		½	11/16	13/16	1 1/16	1¼	1⅝	1⅞	2½
Standard Globe and Angle Valves	Each,	.72	.77	1.00	1.26	1.80	2.52	3.50	5.30
Competition Globe and Angle Valves	Each,	.72	.77	1.00	1.26	1.80	2.52	3.50	5.30
Standard Horizontal Check Valves	Each,	.65	.70	.90	1.15	1.60	2.25	3.15	4.75
Competition Horizontal Check Valves	Each,	.65	.70	.90	1.15	1.60	2.25	3.15	4.75
Standard Vertical Check Valves	Each,	.72	.77	1.00	1.26	1.80	2.52	3.50	5.30

Gate Valves

No. 127

Standard Grade (Light).

Made of high grade steam bronze and guaranteed for working pressure up to 100 lbs. Has double discs, which are firmly and easily held between the seats by a ball and socket bearing in the center.

Size Pipe Thread	Each
⅜	1.45
½	1.65
¾	2.05
1	2.80
1¼	3.70
1½	5.00
2	7.30
2½	13.00

Lever Throttle Valve

Made of high grade material, and will stand working pressure of 200 lbs.

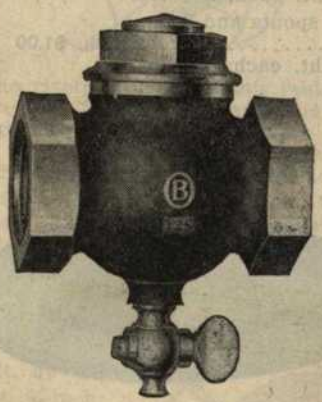
No. 131.

This valve has the same working principle as the regular Gate Valves. It opens quickly with a single pull of the lever instead of having to turn a hand wheel several times around. Can be operated if necessary by a rod connection from a distance.

Size Pipe Thread	Each
¾	$ 6.00
1	$ 8.00
1¼	$10.00

Horizontal Check Valves

With Drip Cock.

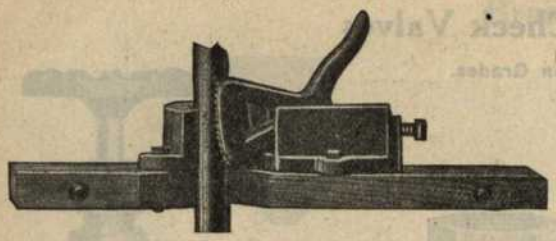


This Valve is similar to our Standard Horizontal Check Valve except it is equipped with a drip cock for draining and will stand pressure up to 125 pounds.

Pipe thread, inches	¾	1
Outside diameter pipe, inches	1 1/16	1¼
Each	2.55	3.15

FOR PIPE WRENCHES, CUTTERS AND OTHER PIPE WORKING TOOLS, SEE INDEX

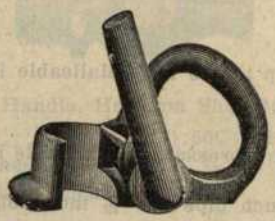
Pipe Holder



Holds up to 2-inch pipe. Made of cast iron, painted black and mounted on 2-inch plank. Chilled, hardened concave pipe jaw will hold wet or greasy pipe and yet will not crush or damage it. Weight each, 30 lbs.

No. 8715.....Each, $5.50

Pipe Lifting Clevis



Made of cast iron with tool steel grip. Handles up to 2-inch pipe. Weight each 10 lbs.

No. 230.....Each, $2.20

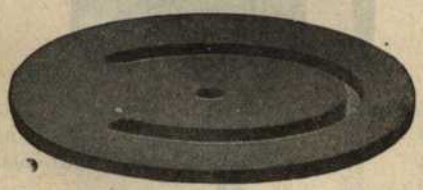
Pump Spout Attachment

Provided with a swivel bail so pipe can be turned in any direction.

No. 1, for medium size spout and 1¼ in. pipe.....Each, $0.84
Weight, each, 3½ lbs.

No. 2, for large spouts and 2 in. pipe.....Each, $1.00
Weight, each, 4¼ lbs.

Flat Valve Leathers



No. 700.

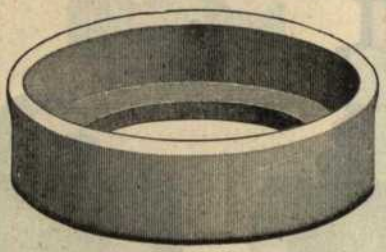
For Cylinder Diameter	Outside Dia. of Leather	Per Gross
2	2½	14.50
2¼	2¾	18.00
2½	3	21.00
2¾	3¼	25.00
3	3½	27.50
3¼	3¾	33.00
3½	4	37.50
3¾	4¼	42.50
4	4½	47.50

In ordering specify diameter of cylinder for which leathers are wanted. Packed 1 dozen in a box.

Pump Leathers

Our leathers are all high grade and accurately made. We guarantee them to be fully as good if not better than other leathers at similar prices.

Standard Cup Leathers

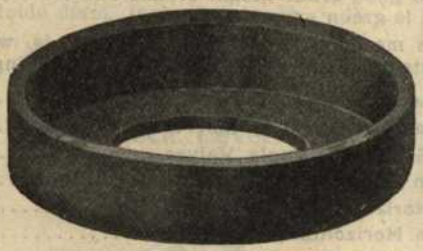


No. 702.

Size	Per Gross	Size	Per Gross
1 -inch	7.50	2¾-inch	29.00
1¼-inch	9.50	3 -inch	32.50
1½-inch	13.00	3¼-inch	39.00
1¾-inch	17.00	3½-inch	48.00
2 -inch	20.00	3¾-inch	54.00
2¼-inch	21.50	4 -inch	62.00
2½-inch	26.00		

Packed 1 dozen in a box.

Black Cup Leathers



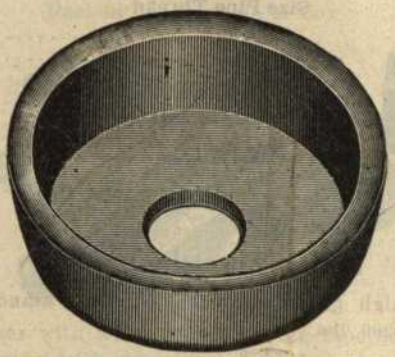
No. 706.

Size	Per Gross	Size	Per Gross
1¾-inch	27.00	2¾-inch	51.00
1⅞-inch	28.50	3 -inch	57.50
2 -inch	36.00	3¼-inch	66.00
2¼-inch	40.00	3½-inch	75.00
2½-inch	43.00	4 -inch	110.00

Packed 1 dozen in a box.

Tank Pump Plunger Leathers

Black or Tan.



5 inch.

	Per Gross
No. 5—Tan	95.00
No. 6—Black	172.00

Packed 1 dozen in a box.

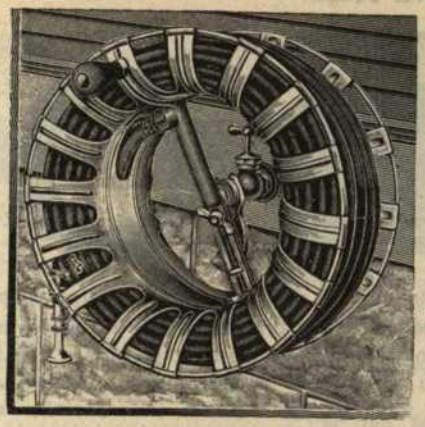
Tank Pump Valve Washers

Made of Rubber.

Per dozen.....$1.00

For Leathers to Fit Automobile Tire Pumps, See Index.

Detachable Hose Reel



This reel is attached and detached instantly from the faucet, the hose being left permanently attached to the reel, and can be hung up or set out of the way when not in use.

The hose is easily drained, and as it is impossible to kink or twist the hose, its life is doubled many times.

A special faucet is furnished with the reel, which is put on the water pipe permanently and forms a hollow axle upon which the reel revolves. The joint is made water tight by means of a hard fibre gasket and thumb screw.

Hose connection will take either ½, ⅝ or ¾-inch hose.

The water may be turned on and as much or as little of the hose unreeled as desired, while the water is running.

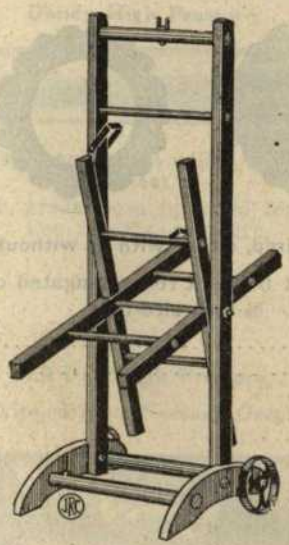
The hose pulls off in any direction. Wood handle fastened to outside of reel makes it easy to draw in and wind up the hose.

The reel is made from galvanized and malleable iron, the faucet is brass, nickel plated. There is absolutely nothing to wear or get out of order. It will last indefinitely.

The Detachable Hose Reel is 20 inches in diameter, 8½ inches wide and easily holds 100 feet of ¾-inch hose. Weight, 8 pounds.

No. 50. ..... Each, $9.50

Wood Hose Reel



Made strong and durable. A good article for the price. Holds 100 feet of hose. Weight each, 9 lbs. Packed two in a bundle.

No. 51..... Each, $3.40

"IT IS AN INDEX TO SUCCESSFUL MERCHANDISING TO BE KNOWN AS A STOWE CUSTOMER."

No. 100 All Steel Hose Reel

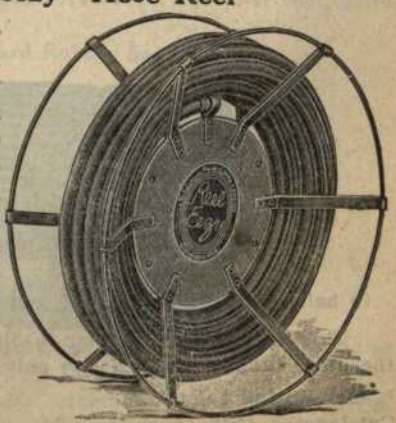
There are no rivets or bolts in this reel. All joints are electrically welded. The wheels and drum are all welded together, making it really one piece, very solid and rigid. Light weight, but very strong. Large wheels make it easy to handle. Drum is galvanized, frame black baked japan.

Diameter of wheel, 21½ inches; drum, 9 inches; width between wheels, 10 inches; length of handle, 28 inches. Capacity, 100 feet of garden hose. Weight each, 17 lbs.

No. 100..... Each, $6.00

"Reeleezy" Hose Reel

Holds 75 ft. of ¾-inch or 100 ft. ⅝-inch garden hose. Fully loaded, it does not take up any more room than the hose itself. Built like a bridge. Its trussed construction gives it the maximum strength for the amount of steel used. 24 inches in diameter, 9 inches wide. Painted Grass Green. Weight 7½ lbs.



No. REL825. ..... Each, $3.00

Sisco Seamless Lawn Hose

Non-Kinkable. Measured and marked every foot.

In bales of 250 and 500 feet, not coupled, also furnished in cut lengths, if desired, either with or without couplings.

A moulded hose with corrugated black cover. Any length piece can be cut for a customer without waste. It is a seamless rubber and braided fabric hose, made in continuous lengths of 250 and 500 feet. It possesses greater strength and will withstand more pressure than ordinary hose almost double in weight. It is seamless throughout as regards both fabric and rubber. It has no tendency to separate between the plies or unwrap. It is especially adapted to hard service in connection with stables, greenhouses, etc., where vehicles frequently run over it. Its construction prevents any faulty goods reaching the customer for the reason it is vulcanized in molds under pressure and any defects are readily detected during this operation and thrown out.

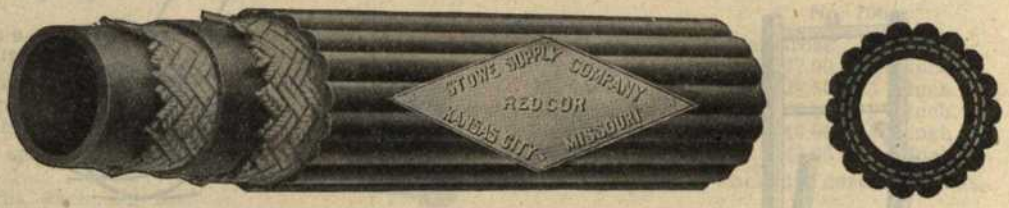
It is the cheapest hose for the customer for the reason it will outlast any other. It is made with two circular braided jackets of tightly twisted cotton yarn. These jackets are seamless, as is also the rubber tube and a separate layer of the very best friction rubber is placed between. A cover or layer of good, desirable rubber completes it.

It should be understood that while this hose is advertised as coming in 250 and 500-foot lengths, this is only approximate—the coils vary more or less either way.

½-inch, in full bales.....Per foot, $0.20
⅝-inch, in full bales.....Per foot, $0.22
¾-inch, in full bales.....Per foot, $0.25
Cut lengths, with couplings, add.....Per foot, $0.01

Redcor Seamless Lawn Hose

Non-Kinkable. Measured and marked every foot.



In bales of 250 and 500 feet, not coupled, also furnished in cut lengths, if desired, either with or without couplings.

This hose is practically the same construction as our Sisco Seamless except it has a red corrugated cover. This is a fine looking, high grade piece of hose and one that will give excellent service. ⅝-inch size only.

⅝-inch, in full bales.....Per foot, $0.24
Cut lengths, with couplings, add.....Per foot, $0.01

Cord Seamless Lawn Hose

Measured and Marked Every Foot

In bales of 250 and 500 feet, not coupled, also furnished in cut lengths, if desired, either with or without couplings.

This hose is made similar to Sisco and Redcor except is 1-ply in place of 2-ply. It is measured and marked same as the other brands. ⅝-inch size only.

⅝-inch, in full bales.....Per foot, $0.20
Cut lengths, with couplings, add.....Per foot, $0.01

Crescent Lawn Hose

Furnished in 50 ft. lengths with couplings, but will cut in any multiple of 5 feet.

Has 4 plies, with black cover. A good serviceable article and will give satisfaction for one or more seasons if used with reasonable care. This hose comes regularly in 50 ft. lengths with couplings, but we will cut this one grade in any multiple of 5 feet at a slight additional cost. 500 feet in a bale.

⅝-inch. . . . . Per foot, $0.19

Spray Pump Hose

No. 1300 Medium Pressure

Put up in 50 ft. lengths, but cut in any length desired.

Intended for any hand sprayer work. ¼ and ⅜-inch sizes are cloth inserted tubing and ½-inch size is 4-ply hose.

Price does not include couplings.

¼-inch. . . . . Per foot, $0.20
⅜-inch. . . . . Per foot, $0.24
½-inch. . . . . Per foot, $0.30

Dandy High Pressure

Furnished in 50 ft. lengths, but will cut in any multiple of 5 feet.

This is a high grade hose intended for high pressure spraying. 6-ply. For 200 lbs. pressure. Price does not include couplings.

⅜-inch. . . . . Per foot, $0.38
½-inch. . . . . Per foot, $0.48

Bull Dog High Pressure

Shipped from Factory Only.

Furnished in 50 ft. lengths only.

This is an excellent grade hose with special tube and intended for high pressure spraying. 6-ply. For 300 lbs. pressure. Price does not include couplings.

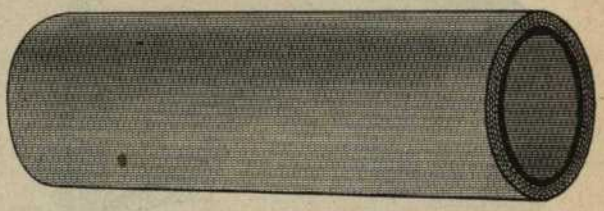
⅜-inch. . . . . Per ft., $0.40
½-inch. . . . . Per ft., $0.50

For Automobile Radiator, Air and Gasoline Hose, see Index.

Thresher Hose

For Telegraph Code, see Page Front of Index.

No. 1000 Plain Cover Discharge Hose



Furnished in 50 ft. lengths, not coupled. Will cut in any multiple of 5 ft.

4-ply. Not made for high pressure.

1 inch. . . . . Per ft., $0.36

No. 200 Special Steam Hose

Furnished in 50 ft. lengths, but will cut in any multiple of 5 feet.

4-ply. Will resist intense heat and at the same time retain its efficiency, thereby insuring continued service. We recommend this hose for general use.

½-inch. . . . . Per foot, $0.60
¾-inch. . . . . Per foot, $0.80
1 -inch. . . . . Per foot, $0.90
1¼-inch. . . . . Per foot, $1.14

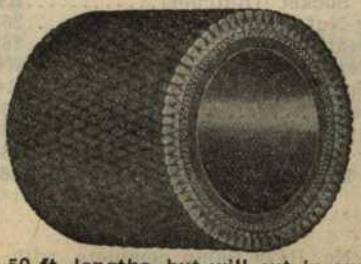
No. 400 Merrimac Hard Rubber Suction Hose

Furnished in 50 ft. lengths, but will cut in any multiple of 5 feet.

We carry all sizes as listed in an excellent grade of stock, with extra heavy tube of high friction, and 4 plies of strong duck. 1 inch is the size most commonly used.

¾-inch. . . . . Per foot, $0.44
1 -inch. . . . . Per foot, $0.48
1¼-inch. . . . . Per foot, $0.60
1½-inch. . . . . Per foot, $1.10

No. 100 Hard Rubber Suction Hose



Furnished in 50 ft. lengths, but will cut in any multiple of 5 feet.

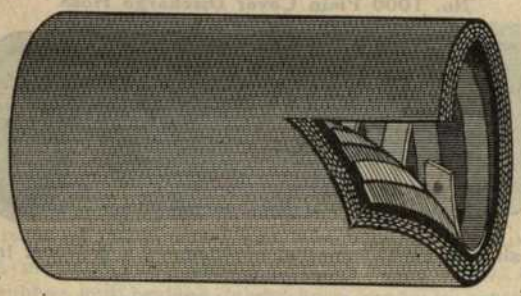
Red braided jacket, but otherwise this material is the same high grade as our Merrimac Hard Rubber. 6 plies.

1-inch. . . . . Per foot, $0.70

Thresher Hose—Continued

For Telegraph Code, See Page Front of Index

Gleaner Rubber Covered Suction Hose

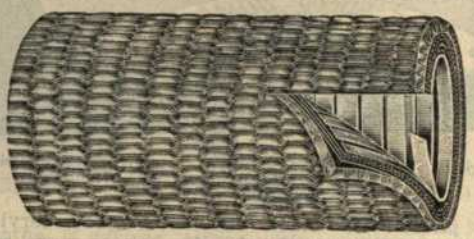


Wire Lined, Rough Bore.

Guaranteed to give good service. Can furnish in 10 ft., 15 ft., 20 ft. and 25 ft. lengths. Made with enlarged ends. Weight 20 ft. lengths, 26 lbs.

1½-inch. . . . . Per foot, $0.66
2 -inch. . . . . Per foot, $0.70

Woven Jacket Cotton Covered Suction Hose



Wire Lined, Rough Bore, Yellow Jacket.

Extra high grade stock, woven cover. Fully guaranteed. Furnished in 15, 20 and 25 ft. lengths. Made with enlarged ends. Weight 20 ft. lengths, 30 lbs.

No. 800—2-inch. . . . . Per foot, $1.00

Repairs for Myers Tank Pumps

No.	Description	For Pumps No.	Each
433	Cylinder, Polished. . .	268	8.45
433	Cylinder, Brass Lined. . .	268	12.35
434	Cap over Valves	268	1.10
435	Hose Nipple for 2¼-inch Suction	268-R479	.65
438	Union Nut for Suction and Discharge	268-R479	.65
444	Head for Cylinder Fitted for Stuffing Nut and Oscillator	268	2.80
445	Head for Cylinder (Plain)	268	2.80
446	Oscillating Link. . .	268	1.05
453	Spout. . .	268-R479	1.70
459	Eye for Piston Rod	268	.65
468	Hose Attachment for Discharge (Regular). . .	268-R479	.65
469	Union Nut for Discharge Hose Attachment. . .	268-R479	.65
477	Valve Drop Check	268	.55
547	Hose Nipple for 2-inch Suction	268-R479	.65
916	Hose Attachments for 1¼-inch Discharge. . .	268-R479	.65
941	Union Nut for Suction and Discharge (Special). . .	268-R479	.65
970	Connection for 2½-inch Pipe Suction or Discharge. . .	268-R479	.65
1159	Strainer, one-half, for 2-inch Hose (Plain Ends). . .	268	.35
1237	Handle Socket (Plain)	268	1.80
1293	Bucket Plate 4⅝ inch Diameter	268-R479	.35
1294	Bucket Plate 5 inch Diameter	268-R479	.35
1801	Rack. . .	R268	1.05
1802	Handle Socket (Ratchet)	R268	1.70
2154	Hose Nipple (90°) for 2-inch Suction	268	.65
2203	Head for Cylinder (Ratchet)	R268	4.20
2534	Hose Nipple (45°) for 1¾-inch Hose	268-R479	.65
2535	Hose Nipple (30°) for 1¾-inch Hose	268-R479	.65
3129	Cylinder, Polished. . .	R479	8.45
3129	Cylinder, Brass Lined	R479	12.35
3130	Head for Cylinder (Ratchet)	R479	4.20
3132	Rack. . .	R479	.65
3133	Cap over Valves	R479	2.80
3134	Valve Drop Check Suction	R479	.55
3135	Valve Drop Check, Discharge	R479	.65
3136	Handle Socket (Ratchet)	R479	1.40
B122	Stuffing Nut. . .	268-R479	.85
B441	Valve Seat Brass	268	.65
B441	Valve Seat Brass Suction	R479	.65
B531	Valve Seat Brass Discharge	R479	.85
	Drip Plug. . .	268-R479	.35
	Handle, Wood. . .	268-R479	.70
	Leather for Plunger (Regular)	268-R479	.65
	Rubber Face for Drop Check Valve	268-R479	.05

Myers Tank Pumps

For Telegraph Code, see page front of Index.

Low Down—Double Acting. Fitted for Two-inch Hose and Threaded for Two-inch Pipe. The handle is reversible and can be placed on either end.

This pump was designed so that all working parts can be easily reached for inspection or repairs. By simply loosening one bolt and removing cap all valves are exposed which permits quick removal when necessary. A wrench is the only tool needed. It is fitted for 2-inch suction hose, and both suction and discharge are tapped for 2-inch iron pipe. Drip cocks are provided for draining cylinder to prevent freezing. Spout is reversible.

Cylinders are 5-inch diameter with 5-inch stroke. Capacity 2,000 gallons per hour. Very compact and has large, direct waterways. Valve seats are brass and valves are metal faced with rubber. Cog gear drive makes easy operation. Weight, 76 lbs.

No. R479—Pump only with hose attachments, hose band and strainer. . . . . Each, 15.50

Tank Pump Outfits

Outfit No. 1—No. R479 Pump complete, with 20 feet 2-inch Gleaner wire lined suction hose, 10 feet 1-inch No. 1000 hose for discharge. . . . . Each, $43.10

Outfit No. 2—No. R479 Pump complete, with 15 feet 2-inch Gleaner wire lined suction hose, 10 feet 1-inch No. 1000 hose for discharge. . . . . Each, $39.10

Outfit No. 3—No. R479 Pump complete, with 20 feet 2-inch Gleaner wire lined suction hose; no discharge hose. Each, $39.70

Outfit No. 4—No. R479 Pump complete, with 15 feet 2-inch Gleaner wire lined suction hose; no discharge hose. Each, $35.70

Canvas Stitched Endless Belts

For Telegraph Code, see page front of Index.

These Endless Belts are made of high-grade material and put together in such a way as to offer the greatest possible resistance to wear and tear.

Three feet are allowed for splicing. Rows of stitches are less than ¼ inch apart. The entire belt is saturated with a compound from a private formula which renders the belt impervious to weather conditions.

These Belts are guaranteed against defective material or workmanship and will give satisfactory service when used with ordinary care.

The splice is guaranteed to be as strong as any other part of the belt.

Manufacturer's List, Effective October 1, 1918.

	50 Ft. Each	Approx. wt., lbs.	75 Ft. Each	Approx. wt., lbs.	100 Ft. Each	Approx. wt., lbs.	125 Ft. Each	Approx. wt., lbs.	150 Ft. Each	Approx. wt., lbs.	160 Ft. Each	Approx. wt., lbs.
6-inch, 4-ply	57.00	35	83.00	50	110.00	66	136.00	82	.....	.....	.....	.....
7-inch, 4-ply	65.00	37	95.00	57	125.00	74	155.00	94	185.00	115	.....	.....
7-inch, 5-ply	.....	.....	.....	.....	.....	.....	194.00	113	231.00	135	.....	.....
8-inch, 4-ply	73.00	43	107.00	67	141.00	90	175.00	110	208.00	133	.....	.....
8-inch, 5-ply	.....	.....	.....	.....	.....	.....	218.00	134	261.00	160	277.00	170
8-inch, 6-ply	.....	.....	.....	.....	.....	.....	.....	.....	313.00	183	333.00	195
9-inch, 4-ply	.....	.....	.....	.....	.....	.....	.....	.....	230.00	150	.....	.....
9-inch, 5-ply	.....	.....	.....	.....	.....	.....	.....	.....	287.00	180	305.00	191
9-inch, 6-ply	.....	.....	.....	.....	.....	.....	.....	.....	345.00	206	368.00	220
10-inch, 5-ply	.....	.....	.....	.....	.....	.....	.....	.....	315.00	200	336.00	215
10-inch, 6-ply	.....	.....	.....	.....	.....	.....	.....	.....	375.00	230	400.00	245

We can also furnish any other size wanted by shipping direct from factory with a delay dependent on the length of time required to manufacture the belt. On belts made to special order seven feet are allowed for splicing.

Weights of belts as given above are only approximate, and intended merely as a shipping guidance.

Alfalfa Endless Belts

These belts are made exactly the same as our regular Alfalfa roll belting except they are made endless by a patented splicing process.

	30 ft.	40 ft.	50 ft.	60 ft.	75 ft.	100 ft.	125 ft.
4-inch, 4-ply	*31.00	*38.00	.....	.....	.....	.....	.....
5-inch, 4-ply	*35.20	*43.60	*52.00	.....	.....	.....	.....
6-inch, 4-ply	*40.00	*50.00	60.00	*70.00	85.00	.....	.....
7-inch, 4-ply	.....	.....	67.40	78.40	95.50	.....	.....
5-inch, 5-ply	*42.40	*53.20	*64.00	*74.80	*91.00	*118.00	.....
6-inch, 5-ply	*47.20	*59.60	72.00	*84.40	103.00	134.00	.....
7-inch, 5-ply	.....	.....	82.00	*96.40	118.00	154.00	.....
8-inch, 5-ply	.....	.....	*93.00	.....	*134.50	*176.00	*217.50
8-inch, 6-ply	.....	.....	.....	.....	.....	*206.00	*255.00

*Items preceded by * can be furnished only by shipping direct from factory. We can also furnish any other size wanted by shipping direct from factory with a delay dependent on the length of time required to manufacture the belt. For approximate weights, see comparative size of Canvas Stitched Belts shown above.

Rubber Endless Belts

These belts are of a good grade and designed especially for thresher work. Made endless by a special process which makes is impossible to come apart. Popular sizes carried in stock. Other sizes furnished for shipment from factory only at proportionate prices.

	50 ft.	75 ft.	100 ft.	125 ft.	150 ft.	160 ft.
5-inch, 4-ply	54.00	79.50	105.00	.....	.....	.....
6-inch, 4-ply	64.50	95.00	125.50	156.00	.....	.....
7-inch, 4-ply	75.50	111.50	147.00	183.00	218.50	.....
8-inch, 4-ply	81.50	120.50	158.50	197.00	235.50	.....
9-inch, 4-ply	.....	.....	.....	.....	264.50	.....
7-inch, 5-ply	.....	.....	.....	229.00	274.00	.....
8-inch, 5-ply	.....	.....	.....	247.00	295.00	314.50
9-inch, 5-ply	.....	.....	.....	.....	330.50	352.00
8-inch, 6-ply	.....	.....	.....	.....	349.50	372.50
9-inch, 6-ply	.....	.....	.....	.....	397.50	423.50

For approximate weights, see comparative size of Canvas Stitched Belts shown above.

Alfalfa Belting

FOR EITHER INDOOR OR OUTDOOR USE

Alfalfa is different from other belting in being solidly woven, instead of stitched. There are no stitches to pull out and weaken belt.

It is filled with a green colored preparation which makes it absolutely weatherproof and protects it, so that it is not affected by ordinary hot or cold weather.

It is very pliable, and is guaranteed not to get hard and crack.

It is suitable for either indoor or outdoor work on any kind of a job.

This belt is absolutely guaranteed to give satisfaction when given a fair trial. This means, if 4-ply rubber or stitched canvas belt has been used, then Alfalfa of no lighter weight should be ordered.

Sample mailed on request.

For most satisfactory service, use Alligator Steel Belt Lacing with Alfalfa Belt. See page 532.

SPECIAL NOTE.

One of the greatest reasons for complaints on belting is where the user tries to make a 3-ply belt do the work a 4 or 5-ply should be used for.

Often the customer has only a very faint idea of what a belt will do, and naturally wishing to keep the cost down, he will buy a belt considerably smaller and lighter than he should.

Our belting is all guaranteed to give satisfactory service, but by no means does our guarantee hold good if a 3-ply belt is used where a 4 or 5-ply should be.

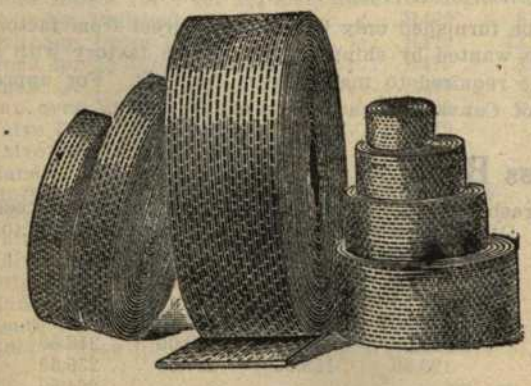
The dealer can save his customer, himself and ourselves a lot of annoyance if he will use great care and insist on selling a belt sufficiently heavy for the work to be done.

Manufacturer's List, Effective Nov. 1, 1919—Per 100 Feet.

Width, ins.	3-ply	4-ply	5-ply	6-ply	8-ply
1	18.00	28.00*	....	....	....
1¼	....	31.00*	....	....	....
1½	26.00*	....	....	....	....
2	32.00*	40.00*	....	....	....
2½	38.00	46.00*	....	....	....
3	46.00	54.00*	78.00	102.00	124.00
3½	52.00	60.00*	88.00	108.00	136.00
4	60.00	70.00*	94.00*	114.00*	150.00
4½	....	78.00	100.00	124.00	166.00
5	....	84.00*	108.00	132.00*	174.00
5½	....	90.00	114.00	142.00	186.00
6	....	100.00*	124.00*	150.00*	196.00
7	....	114.00	144.00	174.00	226.00
8	....	132.00	166.00	196.00	256.00
9	....	150.00	184.00	220.00	300.00
10	....	168.00	208.00	246.00	346.00
12	....	198.00	250.00	300.00	406.00
14	....	234.00	294.00	360.00	480.00
16	....	270.00	344.00	420.00	586.00
18	....	300.00	384.00	466.00	646.00
20	....	346.00	436.00	526.00	706.00
24	....	466.00	556.00	648.00	856.00

Sizes followed by * regularly carried in stock. Other sizes shipped promptly from factory at Chicago.

Canvas Stitched Belting

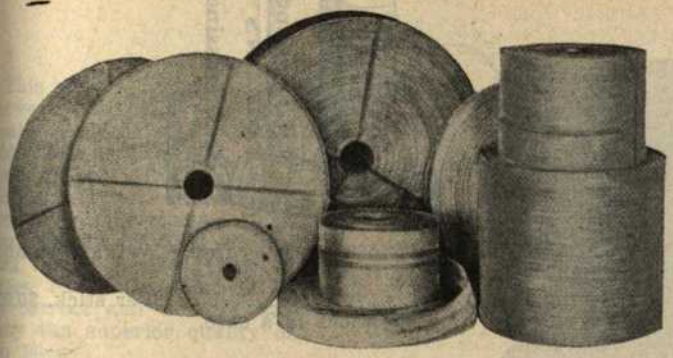


This Canvas Stitched Belting is made of 32-ounce Duck and filled with a preparation which makes it absolutely weatherproof. Stitched very close. Carefully stretched and calendered. Guaranteed against defective workmanship and material, and will give very satisfactory service.

Manufacturer's List, Effective October 1, 1918—Per 100 Feet.

Width, ins.	4-ply	6-ply	8-ply	10-ply
1	20.00	....	....	....
1½	30.00	....	....	....
2	39.00	59.00	....	....
2½	48.00	72.00	....	....
3	57.00	86.00	....	....
3½	65.00	98.00	....	....
4	74.00	111.00	148.00	....
4½	81.00	122.00	162.00	....
5	90.00	135.00	180.00	....
6	105.00	158.00	210.00	....
7	120.00	180.00	240.00	....
8	135.00	203.00	270.00	....
9	149.00	224.00	298.00	....
10	162.00	243.00	324.00	....
11	176.00	264.00	352.00	....
12	205.00	308.00	410.00	513.00
13	215.00	323.00	430.00	537.00
14	231.00	347.00	462.00	578.00
15	248.00	372.00	496.00	620.00
16	264.00	396.00	528.00	660.00
18	297.00	446.00	594.00	743.00
20	330.00	495.00	660.00	825.00
22	363.00	545.00	726.00	908.00
24	396.00	594.00	792.00	990.00

Rubber Belting



Superior Grade.

This is a very high grade belt and made to withstand every extreme transmission duty. It has a friction surface and the heavy gum cushion under the top ply affords special resistance to moisture, reducing internal wear and increasing the flexibility and life of the belt.

Reliable Grade

A good grade of belt and one that can be relied upon to give the best of satisfaction. Made from extra strong duck with an excellent friction and cover. It is made with a friction surface, giving excellent gripping qualities.

Continental Grade

While this is a very good belt, it is intended only for reasonably light work, such as stacker webs, conveyor belts, etc. It has a friction surface.

Manufacturer's List Effective May 21, 1918—Per 100 Feet

Width, ins.	2-Ply	3-Ply	4-Ply	5-Ply	6-Ply	7-Ply	8-Ply
1	18.00	20.00	24.00	....	....	....	....
1¼	23.00	26.00	30.00	....	....	....	....
1½	27.00	31.00	36.00	45.00	....	....	....
1¾	32.00	36.00	42.00	53.00	....	....	....
2	34.00	39.00	46.00	58.00	69.00	....	....
2½	42.00	48.00	56.00	70.00	84.00	....	....
3	48.00	55.00	65.00	81.00	98.00	....	....
3½	57.00	65.00	76.00	95.00	114.00	....	....
4	61.00	70.00	82.00	103.00	123.00	144.00	....
4½	....	78.00	92.00	115.00	138.00	161.00	....
5	....	87.00	102.00	128.00	153.00	179.00	....
6	....	104.00	122.00	153.00	183.00	214.00	244.00

Width, ins.	2-Ply	3-Ply	4-Ply	5-Ply	6-Ply	7-Ply	8-Ply
7	....	122.00	143.00	179.00	215.00	250.00	286.00
8	....	131.00	154.00	193.00	231.00	270.00	308.00
9	....	....	173.00	216.00	260.00	303.00	346.00
10	....	....	192.00	240.00	288.00	336.00	384.00
11	....	....	211.00	264.00	317.00	369.00	422.00
12	....	....	230.00	288.00	345.00	403.00	460.00
13	....	....	250.00	313.00	375.00	438.00	500.00
14	....	....	269.00	336.00	404.00	471.00	538.00
15	....	....	288.00	360.00	432.00	504.00	576.00
16	....	....	308.00	386.00	462.00	540.00	616.00
18	....	....	346.00	432.00	520.00	606.00	692.00
20	....	....	384.00	480.00	576.00	672.00	768.00

Leather Belting

Supreme Grade

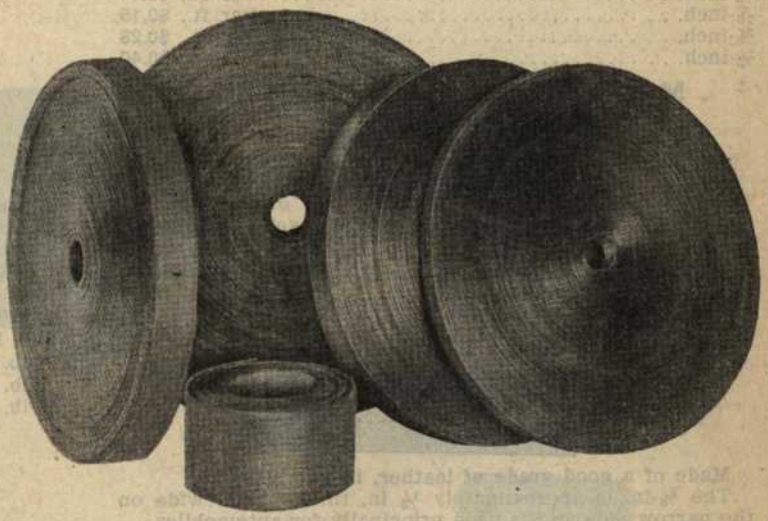
Made of center portion of Native Packer Steer Hides, tanned by long-time process with pure chestnut oak bark. Strictly short lap. A very high-grade belt.

Acme Grade

Made of high-grade hides and short lap. Very good for general machine work or any place a good grade is require.

Comet Grade

A medium grade of regular short lap belt. A big seller and will give very satisfactory service in moderate work. Should not be used in single thickness over 6 inches wide, or in double thickness not over 12 inches wide.



All of the above grades can be furnished oil dressed and with the laps riveted without extra charge when so specified.

Manufacturer's List Effective November 21, 1906—Per 100 Feet

Width, ins.		Width, ins.		Width, ins.		Width, ins.	
1	24.00	2½	60.00	6	144.00	14	336.00
1¼	30.00	3	72.00	7	168.00	16	384.00
1½	36.00	3½	84.00	8	192.00	18	432.00
1¾	42.00	4	96.00	9	216.00	20	480.00
2	48.00	4½	108.00	10	240.00	22	528.00
2¼	54.00	5	120.00	12	288.00	24	576.00

Double belts twice the price of single. Triple belts three times the price of single.

Pulley Lagging

We can furnish Acme Grade, which is about the same as regular Acme Leather Belt, in all regular widths any length desired. Invoiced on regular Leather Belting list.

Solid Woven White Cotton Belting

A high grade of White Cotton Belting very widely used for harvester webbing, for replacing leather straps on canvases, etc. Also used any place where a light belt is required. Regularly put up in rolls of 250 to 500 feet, but can be furnished any length desired.

1 -inch, 3-ply. . . . . Per 100 ft., $ 9.00
1¼-inch, 3-ply. . . . . Per 100 ft., $11.00
1½-inch, 3-ply. . . . . Per 100 ft., $12.00
2 -inch, 3-ply. . . . . Per 100 ft., $14.00

Above sizes regularly carried in stock. We can also furnish other sizes by shipping from factory.

Round Leather Belting

Made from the finest leather and especially treated, which permits the belt to retain its original strength.

Put up 100 ft. on a spool. Cut lengths furnished when so ordered.

¼-inch. . . . . Per ft., $0.11
⅜-inch. . . . . Per ft., $0.15
⅝-inch. . . . . Per ft., $0.28
½-inch. . . . . Per ft., $0.40

Moran's Steel Coupling for Round Belts

¼-inch, outside diameter. . . . . Per doz. pair, $2.90
⅜-inch, outside diameter. . . . . Per doz. pair, $3.60
⅝-inch, outside diameter. . . . . Per doz. pair, $4.00
½-inch, outside diameter. . . . . Per doz. pair, $6.10

One dozen pairs in a box.

V-Shape Leather Belting

Made of a good grade of leather, in two sizes.

The ⅝-in. is approximately ½ in. thick, ⅜ in. wide on the narrow side and is used principally for automobiles.

The 1-in. is ⅝ to ¾ in. thick, ½ in. wide on the narrow side and is used on some tractors and trucks, also on some makes of self-feeders for threshing machines.

⅝-in. . . . . Per ft., $0.50
1-in. . . . . Per ft., $1.10

Farmers' Handy Bundle Lace

Contains approximately one pound of assorted widths and lengths of lace leather.

Farmers' Handy Bundle Lace. . . . . Each, $0.90

Badger Assorted Bundle Lace

Similar to Farmers' Handy Bundle Lace but contains ⅝ pound of narrow widths and assorted lengths of blue chrome lace leather.

Badger Assorted Bundle Lace. . . . . Each, $0.30

Dixon's Belt Dressing

Prevents slipping and increases power. Well known and a high-grade dressing.

In 1-lb. sticks. . . . . Per stick, $0.90

25 sticks in a case.

Carton Belt Dressing

Prepared expressly for canvas-stitched belts. It will not injure the fabric and keeps the belt pliable. Also very good for other kinds of belting.

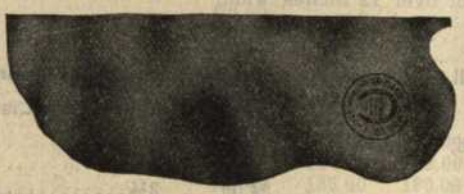
1-lb. Cans. . . . . Each, $1.06
5-lb. Cans. . . . . Each, $5.00

Slip-Knot Belt Dressing

A scientifically compounded material which is not sticky and contains absolutely no rosin or other injurious substances. Can be used with excellent results on any belt constructed of leather, rubber or cotton. It can also be used on rope or cable. It is water-proof and not only prevents slipping but preserves the belt and keeps it soft and pliable.

2-lb. cans. . . . . Each, $0.96
5-lb. cans. . . . . Each, $2.30
10-lb. cans. . . . . Each, $4.60

Stronghold Lace Leather in Sides



A good low-priced lace, of a reddish tan color. Especially adapted for use in harness work, sewing collars, etc. Furnished in orders. Average side has 7 to 8 sq. ft.

Stronghold Lace Leather in Sides...Per square foot, $0.50

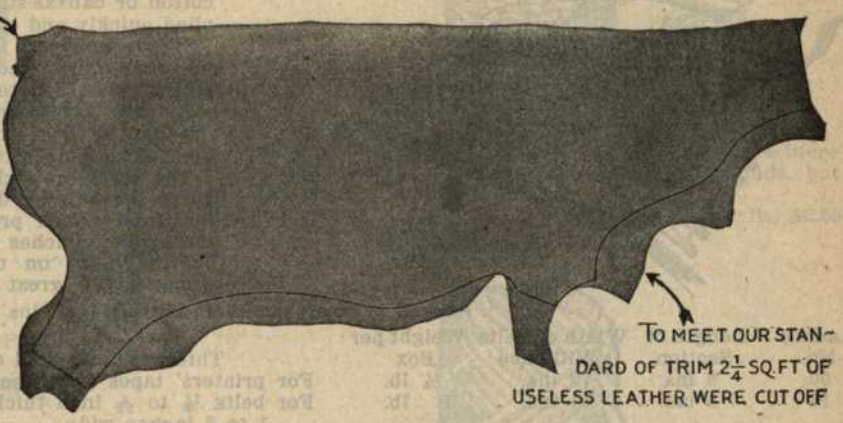
Stronghold Cut Lace Leather

This is the same as the sides except cut in strings ready for use. Put up with a total of 100 ft. in a bundle.

¼-inch. . . . . Per 100 ft., $1.60
⅜-inch. . . . . Per 100 ft., $2.15
½-inch. . . . . Per 100 ft., $3.25
⅝-inch. . . . . Per 100 ft., $3.90
¾-inch. . . . . Per 100 ft., $4.50

Lace Leather

This shows the difference between the way our Lace Leather sides are trimmed and those which sell at a lower price. All of the poor lace is trimmed off so when you buy a side marked 15 ft. you actually get 15 ft. of lace that can be used. We guarantee our measurements to be correct and no one will deny the superior quality of our lace.



Our "Special Tannage" Lace is in a class by itself. Ask anyone who has used it.

Special Tannage Lace Leather

An extra high grade, made from the very best selection of hides, tanned by the original old Indian tannage, producing wonderfully strong, pliable, long-lived leather, which is waterproof and a beautiful golden brown color. Sides are closely trimmed, and they run from 12 to 23 square feet.

Sides measuring 17 feet and under..Per sq. ft., $1.06
Sides measuring over 17 feet.....Per sq. ft., $1.10

Mill Select Lace Leather

A very popular brand of rawhide lace, and one on which we will guarantee satisfaction. Strictly high grade and trimmed closely, the same as our Special Tannage. Sides run from 12 to 23 square feet.

Sides measuring 17 feet and under..Per sq. ft., $1.02
Sides measuring over 17 feet.....Per sq. ft., $1.06

Hand Cut Lace Leather

Furnished in both Special Tannage and Mill Select grades. Long strings. Best quality. Each lace is put up in oil-proof envelope as illustrated and packed 100 ft. in a box. This manner of packing insures keeping the lace clean and orderly and makes it much easier to handle.

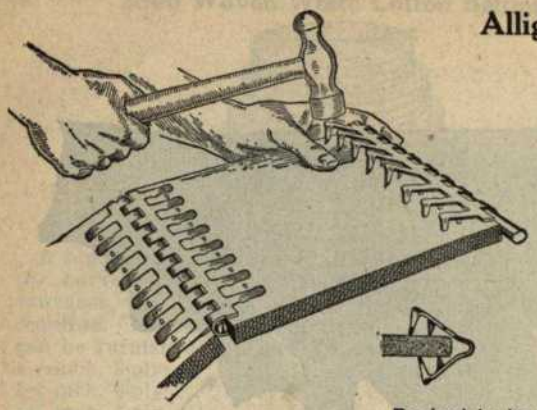
Special Tannage		Mill Select	
¼-inch	Per 100 ft., $2.50	¼-inch	Per 100 ft., $2.50
⅜-inch	Per 100 ft., $3.75	⅜-inch	Per 100 ft., $3.75
½-inch	Per 100 ft., $5.50	½-inch	Per 100 ft., $5.50
⅝-inch	Per 100 ft., $6.50	⅝-inch	Per 100 ft., $6.50
¾-inch	Per 100 ft., $7.50	¾-inch	Per 100 ft., $7.50

Hardware Special Cut Lace Leather

This grade is intended for use where the highest quality is not demanded. It will give very good service, however, on ordinary work. Furnished only in two sizes, put up 100 ft. in a bundle.

⅜-inch . . . . . Per 100 ft., $3.75
½-inch . . . . . Per 100 ft., $5.50

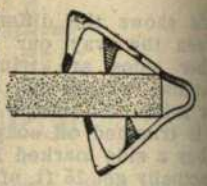
Alligator Steel Belt Lacing



A well-known separable Lacing, hinging on a rawhide or sectional steel rocker pin. For use on leather, rubber, cotton or canvas-stitched belting. This Lacing can be applied quickly and easily.

We recommend the steel rocker pins for work under wet conditions or severe strain. The twisted rawhide pins give satisfactory results where the work is dry and service moderate. We can furnish extra pins when ordered.

The teeth on each side of this Lacing enter the belt on different lines of perforations. Each prong has two teeth—the longer clinches through the belt, the shorter point on the opposite side of prong gives great additional strength.



Showing exact size No. 25.

Packed in boxes complete with Hinge Pins as follows:

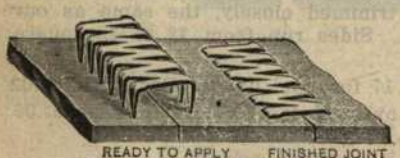
Lacing No.	Length of Section	Width of Belts It Will Lace	Weight per Box	Thickness and kind of belt it will lace	Per Box
00	6 ins.	72 ins.	¼ lb.	For printers' tapes and tape belts up to $\frac{1}{16}$ inch	2.60
15	8 ins.	64 ins.	1 lb.	For belts ⅛ to $\frac{3}{16}$ inch thick; for very light single leather belting 1 to 2 inches wide	2.60
20	12 ins.	60 ins.	1¼ lbs.	Leather or 3-ply fabric belts up to $\frac{3}{16}$ inch thick	2.60
25F	8 ins.	48 ins.	1½ lbs.	Single leather, 3 and 4-ply rubber and cotton or any kind of belting $\frac{3}{16}$ to $\frac{1}{4}$ inch thick	2.50
25G	12 ins.	96 ins.	2½ lbs.	Same as No. 25F	5.00
27L	12 ins.	96 ins.	3¼ lbs.	Leather or 4-ply fabric belts up to $\frac{1}{4}$ inch thick	5.30
35M	8 ins.	32 ins.	1¾ lbs.	Light double leather, 4 and 5-ply rubber, 5 to 6-ply cotton or belts not over $\frac{3}{16}$ inch thick	2.30
35N	12 ins.	48 ins.	2½ lbs.	Same as No. 35M	3.40
45U	12 ins.	48 ins.	3¼ lbs.	Heavy double leather, 5 and 6-ply rubber, also 6-ply cotton or belts not over ⅜ inch thick	4.50
55W	12 ins.	48 ins.	5 lbs.	Rubber, cotton or Balata belts up to $\frac{7}{16}$ inch	5.20
65X	12 ins.	48 ins.	5¾ lbs.	7 and 8-ply rubber, cotton or Balata belts up to ½ inch	6.00
75	12 ins.	48 ins.	10 lbs.	For belts ½ to ⅝ inch thick	8.80

Nos. 00 and 15 are packed with rawhide pins only; all other sizes are packed only with rocker hinge pins. Extra hinge pins furnished at nominal cost, on special order. We do not break boxes of Lacing.

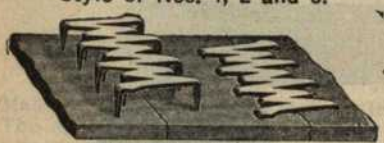
Handy Packages Alligator Belt Lacing

Same as regular Alligator Lacing except put up in small packages for those who have only an occasional belt to lace. 10 packages in a carton.

*15S	6 ins.	12 ins.	3⅛ ozs.	For belt ⅛ to $\frac{3}{16}$ inch thick; for light single leather and 3-ply fabric	.55
*25S	6 ins.	12 ins.	4 ozs.	For belt $\frac{3}{16}$ to $\frac{1}{4}$ inch thick; for medium single leather and light 4-ply fabric belt	.70
*27S	6 ins.	12 ins.	5 ozs.	For belts ¼ to $\frac{5}{16}$ inch thick; for light double leather and 4-ply and light 5-ply fabric belts	.75
*35S	6 ins.	12 ins.	6 ozs.	For belts $\frac{5}{16}$ to $\frac{7}{16}$ inch thick; for double leather and 5-ply fabric belts	.95



Style of Nos. 1, 2 and 3.



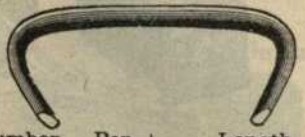
Style of Nos. 111, 112 and 113.

Bristol Steel Belt Lacing

A perfect fastening. Makes smooth and elastic joints. Quickly and easily applied. Each box contains assorted lengths, enough to lace 100 inches in width of belt. No boxes broken.

		Per Box
No. 1	—For ordinary single leather belts from $\frac{3}{16}$ to ¼-in. thick	1.50
No. 2	—For extra heavy and wide single leather belts from ¼-inch to $\frac{5}{16}$-inch thick	2.00
No. 3	—For double leather belts $\frac{5}{16}$ to ⅜-inch thick	2.50
No. 111	—For all kinds of belts $\frac{3}{16}$ to ¼-inch thick. Ordinary single leather and 3-ply rubber and cotton belts	1.50
No. 112	—For all kinds of belts ¼ to $\frac{5}{16}$-inch thick. Extra heavy and wide single leather and 4-ply rubber and cotton belts	2.00
No. 113	—For all kinds of belts $\frac{5}{16}$ to ⅜-inch thick. Double leather belts and 5-ply rubber and cotton belts	2.50

Belt Hooks



No.	Length, ins.	Number in Box	Per 1,000	No.	Length, ins.	Number in Box	Per 1,000
13	¾	250	2.60	8	1¼	250	5.00
12	$\frac{13}{16}$	250	2.80	7	$1\frac{5}{16}$	250	6.00
11	$\frac{7}{8}$	250	3.00	6	1¾	125	8.50
10	$1\frac{1}{16}$	250	3.50	5	$2\frac{1}{16}$	125	11.00
9	1⅛	250	4.00	4	$2\frac{5}{16}$	125	14.00

Belt Hook Assortment

This assortment contains 10 each of the above belt hooks Nos. 4 to 13, a total of 100 hooks.

No. 176 Assortment.....Each, $1.20

Wire Belt Lacing

Belts fastened with this wire have great strength in the joint, and the wire can be easily and quickly applied by hand. Each box contains 50 feet, with the ends joined by a special lead seal. Yellow finish.

No.	Belt Adapted for	Width Belt, ins.	Per Box
50	Single	2½ and under	$2.00
51	Single	3 to 5	$2.00
52	Single	6 to 12	$2.00
	Double	6 and under	
53	Double	6 and over	$2.00

Stowe Special Piston Packing

Used for Pistons, Plungers, etc., and will stand pressures up to 120 lbs.

Will not harden and retains its softness under all degrees of heat. Carried in sizes $\frac{1}{16}$ to $\frac{3}{4}$-inch. Packed in a box, containing approximately 12 feet of one size. No boxes broken.

Approximate Weight Per Box.

$\frac{1}{16}$-inch	$\frac{5}{8}$ lb.	$\frac{7}{16}$-inch	1¾ lbs.
¼-inch	$\frac{7}{8}$ lb.	½-inch	2¼ lbs.
$\frac{5}{16}$-inch	1 lb.	$\frac{5}{8}$-inch	3⅜ lbs.
⅜-inch	1¼ lbs.	¾-inch	4½ lbs.

Any size.....Per lb., $1.20

Spiral Red Core Piston Packing

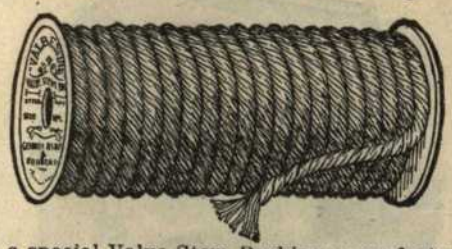
Used for Pistons, Plungers, etc., and will stand pressure up to 150 lbs.

Made with round red rubber core. Absolutely free from grit or acid. Made in sizes $\frac{1}{16}$-inch to $\frac{5}{8}$-inch. Put up approximately 12 feet in a box. No boxes broken.

Approximate Weights Per Coil.

$\frac{1}{16}$-inch	⅜ lb.	$\frac{7}{16}$-inch	1⅜ lbs.
¼-inch	½ lb.	½-inch	1½ lbs.
$\frac{5}{16}$-inch	⅝ lb.	$\frac{5}{8}$-inch	1⅞ lbs.
⅜-inch	¾ lb.	Any size	Per lb., $2.00

Valbestine Valve Stem Packing



This is a special Valve Stem Packing, manufactured from specially selected asbestos yarn, thoroughly lubricated. Round twisted. Will stand all pressures, either hot or cold. Put up in 1-lb. spools.

$\frac{1}{16}$-inch	Per lb., $1.90
$\frac{1}{16}$-inch	Per lb., $1.90
¼-inch	Per lb., $1.90

Perfection Pump Packing

This packing is made especially for circulation systems of automobiles. It overcomes clogging and is not affected by action of the water.

Perfection Packing is made of long strand flax. It is twisted hard and graphited with high grade plumbago. It is a high grade, dependable packing and gives excellent service. Put up on spools of approximately ½ lb. Packed 1 in a box.

Perfection Pump Packing.....Per spool, $1.20

Hemp Packing

Used for Pump Heads or around any plunger where there is no heat. Put up in coils of 25, 50 or 100 pounds, but will furnish any quantity desired.

Hemp Packing.....Per lb., $0.66

Cotton Candle Wicking

Used same as Hemp packing except it will withstand heat and can be used on hot water valves, etc. Put up in ⅛-lb. balls.

Cotton Candle Wicking.....Per lb., $1.10

Asbestos Wick Packing

Used same as Hemp packing except it will withstand heat and can be used on hot water valves, etc. Put up in ½-lb. balls.

Asbestos Wick Packing.....Per lb., $1.20

Cotton Waste—In Bales

Put up in bales of either 50 or 100 lbs. approximate weight. Will furnish any quantity.

No. 1—White	Per lb., Market
No. 2—White	Per lb., Market
No. 1—Colored	Per lb., Market
No. 2—Colored	Per lb., Market

Waste in 5 and 10-lb. Bales

We can also furnish White Waste in 5 and 10-lb. bales for small shops, private garages, etc.

5-lb. bales	Market
10-lb. bales	Market

Waste in Bags

White only, in 5-lb. bags.

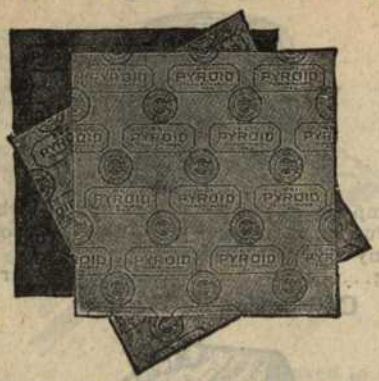
Per bag.....Market

Waste in Cartons

This is a small paper carton containing ½ lb. of waste.

No. 1685.....Per doz. cartons, Market

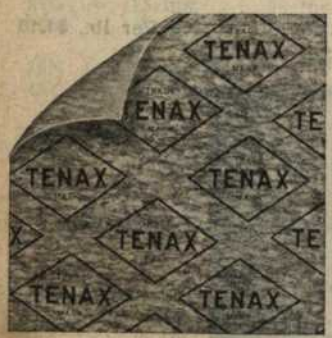
Pyroid High Pressure Packing



A compressed asbestos sheet packing. Used on steam engines for steam chests, cylinder heats, etc. Adapted for high pressures, superheated and saturated steam, acids, ammonia, gas, oils, alkaline, etc. Made in sheets 1/32 and 1/16 inch thickness, 50 inches wide and 50 inches long. No sheets cut. Approx. weight per sheet, 1/32-in., 5 lbs.; 1/16-in., 10 lbs.

Pyroid Packing.....Per lb., $1.50

Tenax Compressed Sheet Packing



A very tough, compressed asbestos fibre sheet. It will stand high temperature. Made in sheet 1/32 and 1/16-inch thickness, 50 inches wide and 50 inches long. No sheets cut. Approx. weight per sheet, 1/32-in., 4½ lbs.; 1/16-in., 9 lbs.

Tenax Packing.....Per lb., $1.50

Vellumoid Sheet Packing

A strong fibre, chemically treated, making it Oil, Gasoline, Water and Air-Proof. Very compressible, which insures a tight joint. Tough, so that gaskets do not tear or break. Stands any temperature up to 350° F. Stocked in rolls, width 36 inches. Will cut any length full width of roll.

Approx. weight per square yard, 1/16-in., ¾ lb.; 1/32-in., 1½ lbs.; 1/16-in., 3 lbs.

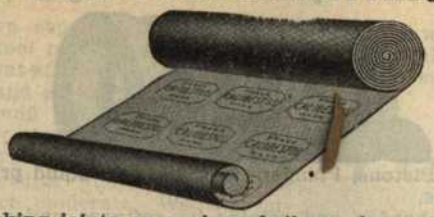
Vellumoid Packing.....Per lb., $1.60

Adpasco Treated Gasket Paper

A durable, especially made paper sheet with a water-proof compound between layers. Ideal packing for automobiles, tractors, etc. Size 36x40 inches. No sheets cut. Approximate weight per sheet 1 lb.

Adpasco Gasket Paper.....Per sheet, $0.70

Garcobestos Wire Inserted Packing



For packing joints on engines, boilers, pipes, etc., where a good packing is required. Used in large quantities for gasoline engine work. Bronze wire mesh. Waterproofed with a special preparation. Red on one side and graphited on the other. Rolls 40 inches wide. Made 1/32 and 1/16 inch thick. Will cut any length on full width of roll. Approx. weights per running yard, 1/32-in., 4 lbs.; 1/16-in., 6 lbs.

Garcobestos Packing—1/32 inch.....Per lb., $1.60
Garcobestos Packing—1/16 inch.....Per lb., $1.50

Stowe Red Rubber Packing

Very tough and durable. Made especially for high pressures. Will not blow out, harden or crack. Guaranteed equal to any other brand of Red Rubber Packing on the market.

Used on steam engines for steam chests, cylinder heads, pipe unjons, etc. Made in all thicknesses from 1/32 to ⅛-inch. Rolls 36 inches wide. 1/16-inch is the most satisfactory thickness for general work. Will cut any length full width of roll. Approx. weight per running yard, 1/16-in., 5½ lbs.; 1/32-in., 8¼ lbs.; ⅛-in., 11 lbs.

Stowe Red Rubber Packing.....Per lb., $0.70

Asbestos Sheet Millboard

For protecting overheated surfaces. It is also used for packing joints around steam plants.

Approximate Weights per Sheet.

1/32-inch, 36x36 inch.. 3 lbs.	1/16-inch, 42x48 inch..15 lbs.
1/32-inch, 36x36 inch.. 5 lbs.	¼-inch, 42x48 inch..21 lbs.
⅛-inch, 36x36 inch.. 6 lbs.	½-inch, 42x48 inch..44 lbs.
⅛-inch, 42x48 inch..11 lbs.	

Orders should state whether we can cut sheets in quarters to make better crating.

On orders for small quantities where the order does not give us permission to cut the sheets in quarters, we must make an extra charge for the crating.

Small quantities.....Per pound, $0.30
Quantities of 100 pounds or more.....Per pound, $0.24

Asbestos Paper

In rolls 36 inches wide, 50 and 100 lbs. Furnished in both Nos. 10 and 14. Approx. weight per 100 sq. feet, No. 10, 10 lbs.; No. 14, 14 lbs.

No. 10.....Per lb., $0.13
No. 14.....Per lb., $0.13

Ruggles Perfection Flue Cleaner

Light and strong and the knives are so made that they are always sharp. It is self-adjusting. Heads are drop forgings. Will clean welded flues and remove the scales from tubes without cutting the metal. Knives made of high grade spring steel. It has no screws or rivets in its construction, and yet is the strongest cleaner made. Can be operated by a flexible handle, where space is limited. Packed 1 in a box.

For tubes, outside diam., ins...	1¾	2	2½	3	3½
Each.	2.00	2.00	2.50	3.00	3.50

Engineers' Favorite Flue Cleaner

Made of Steel and Malleable Iron.

This is a double headed cleaner. Scraping knives always sharp. Can be easily adjusted while in the flue.

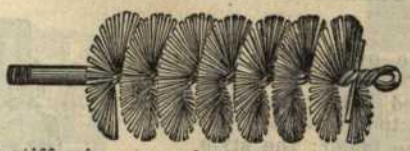
For tubes outside diam., ins.	1¾	2	2¼	2½	2¾	3	3½
Each.	2.00	2.00	2.25	2.50	2.75	3.00	3.50

Combination Flue Brush and Scraper

The scraper end is the same as on Engineers' Favorite. The steel brush following the scraper insures clean flues. Packed 1 in a box.

For tubes outside diam., ins.	2	2½	3	3½
Each.	4.00	5.00	6.00	7.00

Flat Steel Wire Flue Brush



Made of stiff wire securely twisted in a wire bundle. Size marked on Brush indicates size tube it will clean.

For tubes outside diam., ins.	1¾	2	2¼	2½
Each.	$0.60	$0.70	$0.80	$1.00
For tubes outside diam., ins.	2¾		3	3½
Each.	$1.10		$1.20	$1.40

No. 3 Roller Tube Expander

This Expander is one of the best, most simple, efficient and economical roller expanders on the market. It is made with a solid body, thus eliminating chance for breakage of screws, etc. One expander will answer for any thickness of tube sheet. Packed 1 in a box.

For tubes outside diam., ins. . . .	1¾	2	2½	3
Expansion, ins. .	1½ to 1¾	1¾ to 2	2 5/32 to 2½	2 11/16 to 3
Each.	10.00	10.00	14.00	18.00

Steam Gauges

For Telegraph Code See Page Front of Index.

No. FP.

No. FP is for steam, air, or any pressure medium that will not deteriorate brass. Made in steel case with hard rubber finish. The interior mechanism is a single spring and independent geared movement. Very accurate 4½ inch dial. ¼ inch pipe connection on bottom, with shut-off cock.

Outside diameter of shank ½ inch. Packed 1 in a box.

No. FP. . . . . Each, $5.30

No. AT.

No. AT is for traction or portable engines. Made in iron case with brass ring. The interior mechanism consists of an auxiliary spring and hard geared movement. The ring is fitted with an asbestos packing ring which keeps out all moisture, dust, etc. 4½ inch dial. ⅜ inch pipe connection on bottom. Outside diameter of shank 11/16 inch. Packed 1 in a box.

No. AT. . . . . Each, $10.20

U. S. Automatic Injector

For Telegraph Code See Page Front of Index.

Each injector is tested on different lifts and with various steam pressures. A card is attached to the injector showing its range and every one is guaranteed to work as per card attached. Packed 1 in a box.

No.	Horse Power	Pipe Connections	Thread Outside Diameter	Capacity Gals. per Hour Maximum	Capacity Gals. per Hour Minimum	Each
1	4 to 8	⅜ inch	11/16 inch	90	55	16.00
2	8 to 16	½ inch	13/16 inch	135	65	18.00
3	12 to 22	½ inch	13/16 inch	180	100	20.00
4	17 to 32	¾ inch	1 inch	260	140	25.00
5	20 to 45	¾ inch	1 inch	355	170	30.00
6	40 to 65	1 inch	1 5/16 inch	475	300	40.00

U. S. Automatic Injector

From Factory Only.

Size of Injector	No. 1 to 3	4 and 5	6
D—Tail Pipe. . . .	$0.60	$0.70	$0.80
E—Tail Pipe Nut	$0.60	$0.80	$1.00
A—Steam Jet. . .	$1.60	$2.00	$2.30
B—Suction Jet . .	$1.00	$1.50	$2.50
C—Delivery Tube	$2.00	$2.20	$2.90
F—Delivery Cap.	$2.00	$2.20	$2.90
G) Overflow H (Cap & Valve	$1.60	$1.90	$2.00

Penberthy Injectors

For Telegraph Code See Page Front of Index.

Automatic

Showing left and back connections for general work. This is the only model carried in stock. Others from Factory only

A perfect restarting automatic machine; meaning, if the current of water is broken by any cause, the injector will pick up the water and re-establish the current to the boiler without the least attention. Every machine is carefully tested, and will work on the following points: Start low, 20 to 22 lbs. steam on 3-foot lift. Work high, 165 to 170 lbs. steam on 3-foot lift. Lift water, 20 to 24 feet on 60 to 80 lbs steam. Will deliver water to boiler at 160 to 212 degrees, according to temperature of feed water and steam pressure. Water 200 to 212 degrees can always be delivered at nearly all pressures over 50 lbs. by throttling suction valve and delivering minimum capacity. By placing a short piece of pipe having a stop cock, in the overflow, and closing after the injector has started, water 8 to 10 degrees hotter can be handled, but the injector is rendered non-automatic while the stop cock is closed.

Packed 1 in a box. Approx. wgt. each 5½ lbs.

Size	Price Each	H. P. Based on Ordinary Tubular Boiler	H. P. Based on 30 lbs. Water per H. P. per Hour	Pipe Connections Inches	Gallons per Hour 1 to 3-ft. Lift 60 to 110 lbs. Steam Max.	Min.
O	15.00	3 to 6	4 to 8	¼	60	35
OO	16.00	4 to 8	6 to 12	⅜	80	45
A	18.00	8 to 16	10 to 20	½	135	70
AA	20.00	12 to 22	15 to 30	½	180	100
B	25.00	17 to 32	22 to 45	¾	260	140
BB	30.00	20 to 45	25 to 60	¾	360	180
C	40.00	40 to 65	45 to 80	1	475	250
CC	45.00	45 to 80	50 to 100	1	600	325
D	55.00	50 to 100	60 to 135	1¼	800	425
DD	60.00	75 to 135	85 to 165	1¼	1000	525

Special High Pressure and Hot Water Automatic Injectors

This Injector is made practically the same as the regular Automatic. The only difference is that the angle of tapers, dimensions of drill sizes in spill holes and the parallels and general proportions of the tubes are slightly different. This adjusts the Injectors' range to higher steam pressure than it is advisable to have the regular Injector work to. Specially adapted to traction engines having compound cylinders. Packed 1 in a box. Approx. wgt. each 5½ lbs.

Size No.	Price Each	Supplying Boiler of Horse Power	Pipe Connections	Capacity per Hr. at 180 lbs. Steam Pressure Lifting Water of 74° Temperature Three Feet
325-O	15.00	3 to 6	¼ inch	55 gallons
326-OO	16.00	4 to 8	⅜ inch	76 gallons
328-AA	20.00	12 to 22	½ inch	170 gallons
330-BB	30.00	20 to 45	¾ inch	350 gallons
332-CC	45.00	45 to 80	1 inch	570 gallons
334-DD	60.00	75 to 135	1¼ inch	940 gallons

Penberthy Injectors With Special Connections

From Factory Only.

By reason of lack of space, or because the user wishes to have the overflow of the injector in a certain position, injectors with connections to suit such requirements are necessary. We can furnish all sizes in the various styles illustrated below for shipment from factory. We carry only the regular Stock Model shown in cut to the right.

The style "Left and Right" is adapted for the right hand side of the boiler; the style "Right and Left" for the left hand side. One or the other of these styles is used by nearly all Manufacturers of Traction and Threshing Engines, but for a few of them we have been called on to furnish what is known as style "Right and Back," having the suction on the opposite side from our stock machine, and also what is known as style "Back and Back," having both suction and delivery on the side opposite the overflow.

The above terms "Right and Left," "Left and Right," etc., means "suction on right and discharge on left side of Injector," and vice versa, with overflow facing front.

Sizes, capacities and prices of Special Connections are the same as the stock Injectors, as shown above.

Regular Stock Model Left and Back

Front and Back

Back and Back

Left and Right

Right and Left

Right and Back

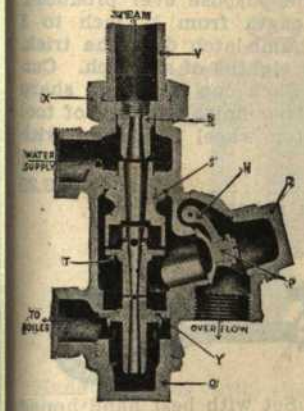
All orders will be filled with regular stock Injectors unless otherwise specified. All patterns except the Regular Stock Model must be shipped from factory. All connections on Injectors are pipe thread.

Penberthy Automatic Injector Repairs**

From factory only.

In ordering Injector parts do not fail to send the serial number and letter, which will be found on top of the overflow, otherwise we must write you for this information, and thus delay shipment.

In referring to or ordering parts, call them by letter or name as in cut below, and not by such names as "upper valve," "lower valve," etc., which do not appear in this list.



R-Steam Jet. V-Tail Pipe
S-Suction " X-Coupling Nut
Y-Delivery" Z-Overflow Cap
O-Plug P- " Valve
N- " Hinge

No. Size Injector	O or OO	A or AA	B or BB	C or CC	D or DD
R—Steam Jet	$0.50	$0.70	$0.90	$1.10	$1.30
S—Suction Jet	$0.50	$0.70	$0.90	$1.10	$1.30
Y—Delivery Jet	$2.50	$3.00	$4.00	$5.00	$6.00
X—Coupling Nut	$0.50	$0.60	$0.80	$1.00	$1.20
V—Tail Pipe	$0.50	$0.60	$0.80	$1.00	$1.20
Z—Overflow Cap	$0.60	$0.80	$1.00	$1.20	$1.40
P—Overflow Valve	$0.80	$1.00	$1.20	$1.50	$1.80
N—Overflow Hinge	$0.20	$0.20	$0.30	$0.30	$0.30
O—Plug	$1.20	$1.60	$2.00	$2.50	$3.00
Strainer	$0.80	$0.90	$1.00	$1.10	$1.20

Brass Strainers

No. A

No. B

No. A is threaded for iron pipe.
No. B has connection for hose.

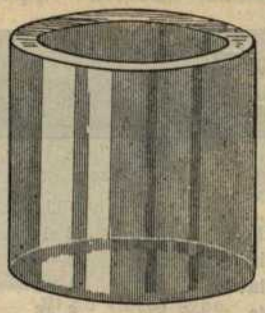
No. A-1—¾-inch pipe . . . . . Each, $1.00
No. A-2—1-inch pipe. . . . . Each, $1.20
No. B-1—¾-inch hose. . . . . Each, $1.00
No. B-2—1-inch hose . . . . . Each, $1.20

Safety Plugs

Used for safety plugs in steam boilers. These plugs are made according to government requirements. Center of plug tapers to inside so plug will not blow out until melted out.

No. A12—½-inch pipe thread. . . . . Each, $0.96
No. A13—¾-inch pipe thread. . . . . Each, $1.00
No. A14— 1-inch pipe thread. . . . . Each, $1.60

Cylindrical Glasses**



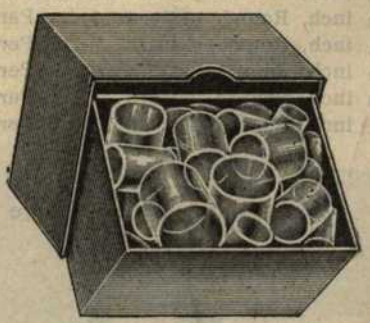
No.	Outside diam., ins.	Height, ins.	Per Doz.
000	1	⅞	$ 3.30
00	1⅛	1	$ 3.90
0	1¼	1⅛	$ 4.00
1	1½	1⅜	$ 4.30
1½	1¾	1⅝	$ 4.90
2	2	1⅞	$ 6.00
3	2¼	2⅛	$ 7.20
4	2½	2⅜	$ 8.70
5	3	3	$12.00
6	3½	4	$14.40
7	4	5	$18.00
8	4¼	5	$24.60

Cork Washers

For Cylindrical Glasses.

No.	For Cyl. Glass No.	Per Doz.
000	000	$0.36
00	00	$0.40
0	0	$0.48
1	1	$0.60
1½	1½	$0.72
2	2	$0.80
3	3	$0.90
4	4	$1.00
5	5	$1.20
6	6	$1.50
7	7	$2.40
8	8	$3.00

Cylindrical Glass Assortment



This assortment contains a total of twelve cylindrical glasses as listed below, put up in a heavy cardboard box. Carefully packed to prevent breaking.

Quantity	No.	Outside diam., ins.	Height, ins.
1.	0	1¼	1⅛
2.	1	1½	1⅜
3.	1½	1¾	1⅝
3.	2	2	1⅞
2.	3	2¼	2⅛
1.	4	2½	2⅜

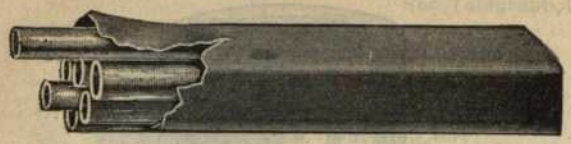
No. 419 Assortment. . . . . Each, $6.00

Cork Washer Assortment

This assortment contains two cork washers for each of the cylindrical glasses in No. 419 Assortment listed above.

No. 420 Assortment. . . . . Each, $1.60

Gauge Glasses



Per Dozen.

Length, ins.	10	11	12	14
½ in. outside dia...	3.00	3.24	3.60	4.20
⅝ in. outside dia...	3.33	3.67	4.00	4.67
¾ in. outside dia...	4.37	4.81	5.24	6.12
⅞ in. outside dia...	5.87	6.46	7.04	8.22
1 in. outside dia...	7.85	8.64	9.42	10.99
Length, ins.	**16**	**18**	**20**	**24**
½ in. outside dia...	4.80	5.40	6.00	7.20
⅝ in. outside dia...	5.33	6.00	6.66	8.00
¾ in. outside dia...	6.99	7.86	8.73	10.48
⅞ in. outside dia...	9.39	10.56	11.74	....
1 in. outside dia...	12.55	14.13	15.70	....

½ inch put up 12 in a package; other sizes 6 in a package.

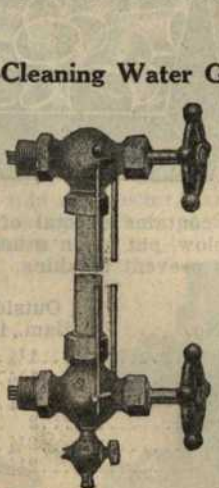
We can also furnish Sight Feed Glasses, ½, ⅝, ¾, ⅞ and 1 inch, cut to any length.

Gauge Glass Washers

Both patterns furnished in ½, ⅝ and ¾ inch sizes.

No. 6R—½ inch, Round pattern.....Per dozen, $0.40
No. 7R—⅝ inch, Round pattern.....Per dozen, $0.40
No. 8R—¾ inch, Round pattern.....Per dozen, $0.40
No. 9S—½ inch, Square pattern.....Per dozen, $0.40
No. 10S—⅝ inch, Square pattern.....Per dozen, $0.40
No. 11S—¾ inch, Square pattern.....Per dozen, $0.40

Self-Cleaning Water Gauge



Round Iron Body, Iron Wheels, Two Guards.

Shank ½ inch pipe thread, outside diameter of shank ⅜-inch. Glass ⅝x12 inches.

No. 402.....Each, $3.60
Packed one in a box.

Gauge Glass Cutters

Wilkins' Improved

One of the finest tools for the purpose ever produced. Cuts easily and quickly any length from ¼ inch to 8 inches. A slight pressure on thumb-latch does the trick. Beam is accurately graduated in eighths of an inch. Cutter wheels are the best made. Each one is ground sharp and tested. Handle has hard rubber finish, balance of tool nickel plated. One extra cutter wheel furnished with each cutter.

No. 031.....Each, $3.20
Packed one in a box.

Favorite

Fitted with adjustable gauge. Set with best hand honed wheel.

No. 032.....Each, $0.40
Packed six in a box.

Acme

This is a very handy tool for accurately cutting Gauge Glasses to any desired length.

No. 033.....Each, $3.60
Packed one in a box.

Boston

Made with a high grade cutting wheel. Nickel plated.

No. 034.....Each, $1.20
Packed one in a box.

Glass Cutters

Straight

Designed for cutting window or light plate glass. Hand made, hand honed wheel.

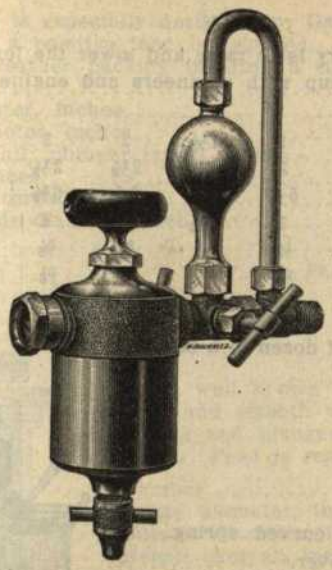
No. 024.....Per dozen, $3.50
Packed one in a box.

Circle

Cuts circles 2 to 22 inches. Metal base, non-slipping rubber cloth mat, steel rod, graduated by 16ths. Hand honed wheel. Two extra wheels included with each Cutter.

No. 263.....Each, $1.80
Packed one in a box.

Swift Sight Feed Lubricator**



Made of brass with single connection and sight feed. Brass finish.

This style Lubricator is the standard style, used by many of the leading builders of portable farm and traction engines, steam pumps, etc. It is very easy to attach, and will feed any oil, even in the coldest weather in the most exposed positions.

It is designed for use where it is desirable to attach with only one connection to steam pipe. Easy to attach. ¼, ⅓ and ½ pt. sizes have ⅜-inch pipe thread connection. 1, 1½ and 2 pt. sizes have ½-inch pipe thread connection. Packed 1 in a box.

No. 201Z—	¼ pt.	Each, $ 7.00
No. 201A—	⅓ pt.	Each, $ 7.50
No. 201B—	½ pt.	Each, $ 8.00
No. 201C—	1 pt.	Each, $12.00
No. 201X—	1½ pt.	Each, $13.50
No. 201D—	1 qt.	Each, $15.00

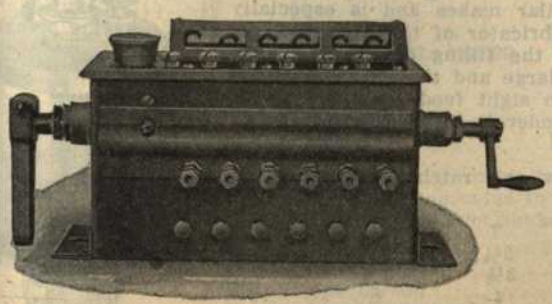
Round Glasses for Sight Feed Lubricators

2 washers included with each glass.

No. 2—Size of a nickel	Per dozen, $3.00
No. 3—Size of a quarter	Per dozen, $3.00
Fibre washers	Per dozen, $0.50

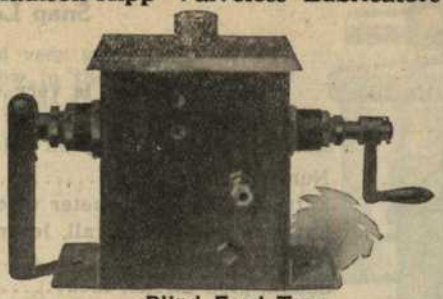
Madison-Kipp Valveless Lubricators

MULTIPLE FEED TYPE.

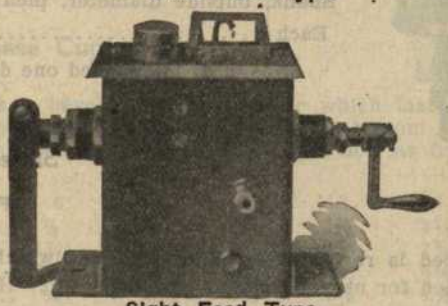


We can also furnish multiple feed Lubricators for shipment from factory only. These are especially designed for tractors and large engines having many bearings and which require forced oiling. Prices quoted on request.

Madison-Kipp Valveless Lubricators**



Blind Feed Type.

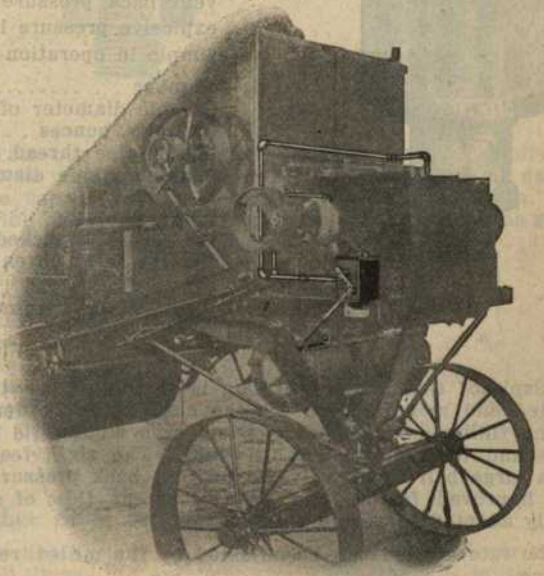


Sight Feed Type.

These Lubricators can be furnished in either the sight feed type or the blind feed type. They are built rugged and substantial for rough and severe service, and all working parts are under cover, running in oil. There are no joints or packing to work loose and leak oil. The tank is made of sheet steel and the design is neat and attractive.

These Lubricators are built on the celebrated KIPP no-valve principle. Over five hundred thousand in daily use in all kinds of service and in all temperatures, are positive proof of their accuracy and reliability. They start and stop with the engine and feed the same always as adjusted. The only care or attention necessary is to fill with oil when needed. We recommend these Lubricators for oiling valves and cylinders on traction engines, hoisting engines, electric light engines, and for oiling cylinder boxes on grain separators, corn shellers, clover hullers and corn shredders.

Cut below shows how a Madison-Kipp Valveless Lubricator is used on a grain separator.



We furnish the Sight Feed type with either one or two feed pipes, or the Blind Feed type with one feed pipe. Orders must specify which is wanted.

The single feed lubricators have a capacity of 5 pints and the double feed 5½ pints. Feeds are threaded for ¼-inch iron pipe. Packed 1 in a box.

No. 50A—	Single, sight feed, weight 20 lbs.	Each, $36.00
No. 50C—	Double, sight feed, weight 25 lbs.	Each, $46.00
No. 50B—	Single, blind feed, weight 20 lbs.	Each, $30.00

Snap Lever Sight Feed Oil Cup*

Finished Brass.

Feed mechanism is very simple. All that is necessary is to raise and lower the lever. Rate of feed is quickly and accurately adjusted. A very popular cup with engineers and engine manufacturers. Has spring hinged oil hole cover.

Number	0	1	1½	2	3	4	5
Extreme outside diameter of cup, inches	1⅝	2	2	2½	2½	3¼	3⅜
Extreme height over all, lever up, inches	5 1/16	5⅜	5 11/16	6 1/16	6⅝	6⅞	8 1/16
Capacity, ounces	⅝	1	1½	2½	4	5	10
Shank, pipe thread, inch	⅛	¼	¼	⅜	⅜	⅜	½
Shank, outside diameter, inch	11/32	½	½	11/16	11/16	11/16	11/16
Each	3.00	3.25	3.50	3.75	4.25	5.25	7.25

Nos. 0, 1, 1½ packed one dozen; Nos. 2, 3, 4, 5, one-half dozen in a box.

Slide Top Oil Cup**

Finished Brass.

The feed is regulated by a knurled nut which is held in place by the curved spring. Well adapted for use on engines, dynamos, etc. Has spring hinged oil hole cover.

Number	0	1	1½	2	3	4	5
Extreme outside diameter of cup, inches	1 1/16	2	2	2½	2½	3¼	3⅜
Extreme height over all, inches	3⅜	3⅞	4⅛	4 1/16	4 13/16	5⅛	6⅛
Capacity, ounces	⅝	1	1½	2½	4	5	10
Shank pipe thread, inch	⅛	¼	¼	⅜	⅜	⅜	½
Shank, outside diameter, inch	11/32	½	½	11/16	11/16	11/16	11/16
Each	$1.60	$2.00	$2.50	$3.00	$3.80	$4.80	$6.20

Nos. 0, 1, 1½ packed one dozen; Nos. 2, 3, 4, 5, one-half dozen in a box.

Meteor Sight Feed Oil Cup

Finished Brass.

For gas and gasoline engines and air compressors.

The "Meteor" is a very popular Lubricator for use on gas and gasoline engines. The advantages of this device is the snap lever feed adjustment, making it possible to start and stop the feed without changing the feed regulation, which when once set, does not have to be again disturbed. The shank is fitted with a flat disc valve to prevent back pressure from cylinder. The feed oil is always steady no matter what explosive pressure it may have to feed against. The "Meteor" is a substantial device, simple in operation and mechanically perfect.

Number	483	484	485	486	487	488
Outside diameter of glass, inches	1¾	2	2⅜	2¾	3⅛	3½
Capacity, ounces	1½	2½	4	6	10	Pt.
Shank pipe thread, inch	¼	⅜	⅜	⅜	½	½
Shank, outside diameter, inch	½	11/16	11/16	11/16	11/16	11/16
Each	$1.80	$1.90	$2.10	$2.40	$2.70	$4.80

Nos. 483, packed two dozen; Nos. 484, 485 one dozen; Nos. 486, 487, one-half dozen; No. 488, 1/12 dozen in box.

Gas Engine Exploso Oil Cup

Finished Brass.

"Exploso" Gas Engine Oil Cup is an improvement over all similar makes and is especially designed and manufactured for the class of trade demanding a Lubricator of the highest type.

The filling arrangement consists of a sliding lid which makes the filling of the cup very simple and insures it being Oil tight. The sight feed opening is large and the shank is fitted with a large ball check valve to prevent back pressure entering the sight feed chamber. With these improved features an even, constant flow of oil to the cylinder is insured, and it is especially adapted to gasoline engines.

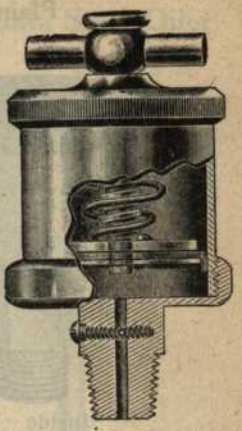
The rate of feed can be adjusted by the milled regulation screw and ratchet holding same to place.

Number	1	1½	2	3	4	5
Outside diameter of glass, inches	1½	1¾	2	2¼	2½	3
Height of glass, inches	1⅝	1⅝	1⅞	2½	2⅜	3
Capacity, ounces	1	1½	2½	4	5	10
Shank, pipe thread, inch	¼	¼	⅜	⅜	⅜	½
Shank, outside diameter, inch	½	½	11/16	11/16	11/16	11/16
Each	4.50	4.75	5.00	5.50	6.50	9.00

Packed one-half dozen in a box.

Gas Engine Automatic Grease Cup*

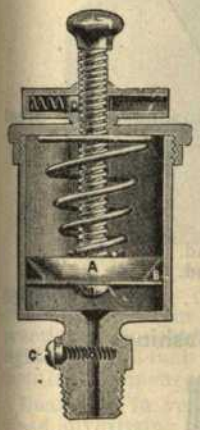
Finished Brass.



This cup is especially designed for Gas Engines but will be found very good for other purposes where a positive feed is required. Feed is regulated by a screw in the shank. Plunger has special leather packing insuring a tight joint. Made of pressed brass and polished.

Number	0	1	2	3
Inside diameter, inches	⅞	1⅛	1½	1¾
Outside diameter, inches	1¼	1½	1¾	2
Height over all; plunger raised, inches	3¼	4½	4¾	5¼
Capacity, ounces	⅛	1	1½	2⅛
Shank, pipe thread, inches	⅛	¼	¼	⅜
Shank, outside diameter, inches	13/32	½	½	11/16
Each	1.50	2.00	2.50	3.20

Packed ½ dozen in a box.



Moon Automatic Grease Cup*

Finished Brass.

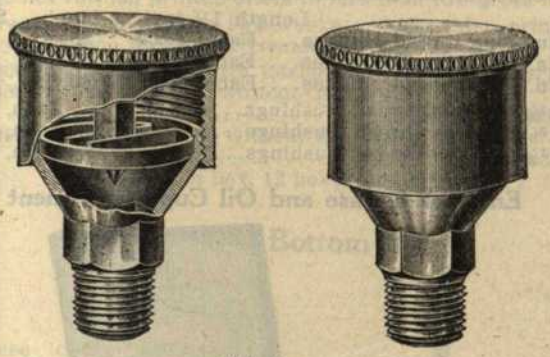
A well known and popular pattern. It has a beveled leather washer which insures a tight joint and smooth working; washer can be expanded by adjusting screw on bottom of plunger. Spring and plunger are controlled by round nut on top of cup, which will not jar from its position. Feed is regulated by screw in shank.

Number	0	1	2	3	4	5
Inside diameter, inches	⅞	1⅛	1½	1¾	2¼	3
Outside diameter, inches	1¼	1½	1¾	2	2¾	3⅜
Height over all, inches	3¼	4½	4¾	5¼	6½	8
Capacity, ounces	⅛	1	1½	2⅛	4½	10
Shank pipe thread, inches	⅛	¼	¼	⅜	½	½
Shank, outside diameter, inches	13/32	½	½	11/16	13/16	13/16
Each	1.50	2.00	2.50	3.20	4.30	6.00

Packed ⅛ dozen in a box.

Ratchet Grease Cups

Pressed Steel.

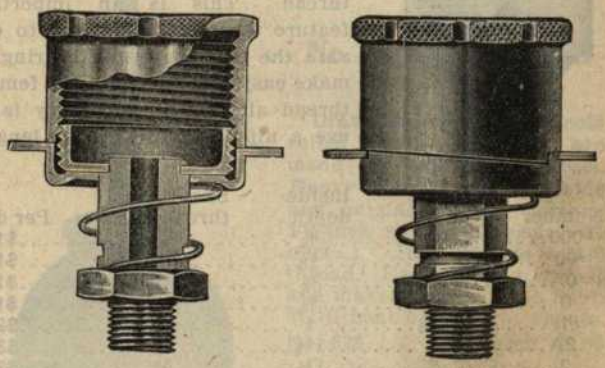


Winkley.

Very simple and yet very effective as a ratchet cup. Absolutely prevents the cap from jarring off. Locking parts are all on the inside. The square tongue which is a part of the cap engages the spring in base as soon as the cap is screwed on one-half thread.

Number	00	0	1	2	3
Inside diam., ins.	1	1¼	1½	2	2½
Shank pipe thread, ins.	⅛	¼	¼	⅜	½
Shank, outside diam., ins.	13/32	½	½	11/16	13/16
Capacity, ounces	⅔	1	1½	2	2½
Per dozen	$1.50	$1.80	$2.20	$3.20	$4.70

Packed 1 dozen in a box.

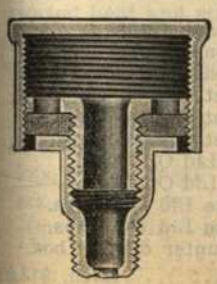


Jupiter.

This cup was originally designed for automobile use, but is very popular wherever a ratchet cup is desired. The cap is positively locked at every half turn. The spring plate may be pushed down and locked in the groove in shank while cap is being removed.

Number	00	0	1	2	3
Inside diam., ins.	1	1¼	1½	2	2½
Shank pipe thread, ins.	⅛	¼	¼	⅜	½
Shank, outside diam., ins.	13/32	½	½	11/16	13/16
Capacity, ounces	½	⅔	1	2	3½
Per dozen	$6.00	$7.20	$8.40	$12.50	$18.00

Packed 1 dozen in a box.



Leather Washer Steel Grease Cups

While these cups cost a trifle more than cups without leather washers, they are well worth it, as the leather can be adjusted to a tight fit at all times. An excellent cup where there is much vibration, for the top will not shake loose so easily.

Number	00	0	1	2	3
Inside diameter	1	1¼	1½	2	2½
Shank pipe thread	⅛	¼	¼	⅜	½
Shank, outside diameter	13/32	½	½	11/16	13/16
Capacity, ounces	½	⅔	1	2	3½
Per doz.	$2.10	$3.00	$4.10	$6.50	$10.80

Packed 1 dozen in a box.

Plain Steel Grease Cups

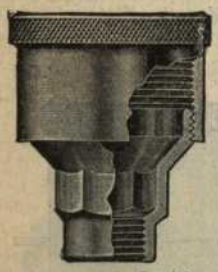
Male Thread.

The most popular cup on the market. Made of pressed steel. Conical shaped base makes it a free and easy feeding cup.

Number	Inside diam., ins.	Inside depth, ins.	Shank pipe thread, ins.	Per doz.
000	¾	⅜	⅛	$ 0.80
00	1	11/16	⅛	$ 1.10
0A	1⅛	⅞	⅛	$ 1.30
0	1⅛	⅞	¼	$ 1.30
1	1½	1	¼	$ 1.60
2A	2	1⅛	¼	$ 2.60
2	2	1⅛	⅜	$ 2.60
3	2½	1⅜	½	$ 3.80
4	3	1¾	½	$ 5.50
5	3½	1⅞	¾	$10.50

Packed 1 dozen in a box.

Female Thread



Made exactly the same as plain steel cups above, except with female thread. This is an important feature where it is desired to elevate the cup above the bearing to make easy access. With the female thread all that is necessary is to use a nipple of the proper length.

Number	Inside diam.	Inside depth	Shank pipe thread, ins.	Per doz.
000	¾	⅜	⅛	$1.20
00	1	11/16	⅛	$1.50
0A	1⅛	⅞	⅛	$1.70
0	1⅛	⅞	¼	$1.90
1	1½	1	¼	$2.00
2A	2	1⅛	¼	$3.00
2	2	1⅛	⅜	$3.00
3	2½	1⅜	½	$4.20
4	3	1¾	½	$5.90

Packed 1 dozen in a box.

Crank Pin Grease Cups

Polished Brass.

By the heat, vibration and vacuum caused with the copper wire resting on the shaft, the grease is conducted to the bearing in sufficient quantity to insure perfect lubrication. The most positive, strong, durable cup made for crank pins.

Number	1	2
Diameter, inches	1⅛	1¾
Height over all, inches	3	3¼
Shank pipe thread, ins.	¼	¼
Shank, outside diam., ins.	½	½
Capacity, oz.	½	1½
Each.	$1.00	$1.70

Number.	3	4
Inside diameter, inches	2	2½
Height over all, inches	3½	4¾
Shank pipe thread, ins.	¼	½
Shank, outside diam., ins.	½	11/16
Capacity, ozs.	2	3
Each.	$2.00	$2.70

Packed ½ dozen in a box.

No. 71 Assortment Grease Cups

This Assortment consists of the following Plain Steel Grease Cups, put up in a cardboard box:

4 No. 00 Male Thread.
6 No. 0 Male Thread.
6 No. 1 Male Thread.
4 No. 2A Male Thread.
2 No. 0 Female Thread.
2 No. 1 Female Thread.

No. 71 Assortment.....Each, $3.50

Grease Cup Nipples and Bushings

Where necessary to place the grease cups at some distance from the hole we recommend the use of female thread grease cups and a pipe nipple. Bushings are used to reduce or increase the size thread on the grease cup.

	Length 1½ inch	2 inch	3 inch
⅛-in. Pipe thread Nipples	Each, $0.08	$0.12	$0.12
¼-in. Pipe thread Nipples	Each, $0.08	$0.12	$0.12
⅜-in. Pipe thread Nipples	Each, $0.08	$0.12	$0.12

⅛x¼ in. Pipe thread Bushings.....Each, $0.08
¼x⅜ in. Pipe thread Bushings.....Each, $0.08
⅜x½ in. Pipe thread Bushings.....Each, $0.08

Empress Grease and Oil Cup Assortment

This assortment contains:

12 No. 00, ⅛-in. Plain Steel Grease Cups.
6 No. 0, ⅛-in. Plain Steel Grease Cups.
6 No. 1, ¼-in. Plain Steel Grease Cups.
12 No. 00, ⅛-in. Winkley Ratchet Grease Cups.
6 No. 0, ⅛-in. Winkley Ratchet Grease Cups.
6 No. 1, ¼-in. Winkley Ratchet Grease Cups.
12 No. 116, Size 4 Elbow Hinge Lid Oil Cups.
12 No. 116, Size 6 Elbow Hinge Lid Oil Cups.
12 No. 118, Size 4 Straight Hinge Lid Oil Cups.
12 No. 118, Size 6 Straight Hinge Lid Oil Cups.

Put up in a very attractive counter display box.

No. 10 Assortment complete.....Each, $18.00

No. 450 Advertising Oilers

This is, without doubt, one of the best advertising mediums a dealer can use. The body of this oiler is made of one piece of tin with a clock spring steel bottom that is practically indestructible. Spouts fit firm and make a tight joint. 3-inch bottom. Capacity 11 ounces. 1½-inch mouth. Furnished assorted bent and straight spouts.

Enameled in yellow with printing in black. In ordering these advertising oilers, don't try to use too many words—the fewer there are, the better they will show up—3 lines of printing is the maximum and 2 lines is preferable. Our advertising department will be glad to help you write your advertisements.

We do not furnish printed oilers in less than full gross lots.

It requires ten days to two weeks to have them printed with your name and advertisement.

No. 450—In gross lots, with dealers' ad..Per gross, $27.60
No. 450—In gross lots, without dealers' ad. .....Per gross, $25.20
No. 450—In smaller lots, without dealers' ad. .....Per dozen, $ 2.30
One dozen in a box, 12 boxes in a carton.

No. 650 Steel Bottom Oilers

These oilers are the same as No. 450, except they have a very attractive lithographed finish with a handsome colored plate which makes a fine appearance on the shelf or counter. These oilers can be printed with the dealer's ad on one side without extra charge when ordered in lots of one gross or more. 3-inch bottom. Capacity, 11 ounces 1½-inch mouth. Furnished assorted bent and straight spouts.

No. 650—In gross lots, with dealers' ad. .....Per gro., $24.00
No. 650—In smaller lots, without dealers ad..Per doz., $ 2.20
One dozen in a box.

No. 690 Heavy Coppered Plate Steel Oiler

A high class standard size and standard weight Oiler with 3-inch bottom, 1½-inch mouth. Drawn from one piece dead soft, cold rolled, special steel. Heavily copper plated inside and out. This Oiler has a fine rolled thread. Easy to put together and makes a tight joint. Spouts are interchangeable and especial attention is paid to making it strong. Have carbon spring steel bottoms. Capacity, 11 ounces. With straight or bent spout.

No. 690.....Per dozen, $4.70
One dozen in a box.

No. 625 Copperized Steel Oiler

Drawn from one piece cold rolled steel. Bottoms are made of clock spring steel. Heavy electro plated inside and outside. 3-inch bottom. 1½-inch mouth. Capacity, 11 ounces. Has a fine rolled thread. Easy to put together and makes a firm, tight joint. With bent or straight spouts.

No. 625.....Per dozen, $4.00
One dozen in a box.

No. 19 Copperized Oiler

Seamless body made of tin with copper plate finish, 3-inch bottom. 1½-inch mouth. Capacity, 11 ounces. With bent or straight screw spouts.

No. 19.....Per doz., $3.40

Copperized Steel Oilers

Made of 20-gauge cold rolled steel with high grade clock spring steel bottoms. Heavily electro copper plated inside and out. Fine rolled thread. 1½-inch mouth.

No. 12	—¼-pint, 2½-inch spout.....Per dozen,	4.50
No. 13	—⅓-pint, 3 -inch spout.....Per dozen,	5.50
No. 13A	—⅓-pint, 5 -inch spout.....Per dozen,	6.00
No. 14	—⅓-pint, 9 -inch spout.....Per dozen,	6.50
No. 14A	—½-pint, 3 -inch spout.....Per dozen,	7.50
No. 14AA	—½-pint, 5 -inch spout.....Per dozen,	8.00
No. 14B	—½-pint, 9 -inch spout.....Per dozen,	8.50
No. 15	— 1-pint, 3 -inch spout.....Per dozen,	9.25
No. 15A	— 1-pint, 5 -inch spout.....Per dozen,	9.75
No. 16	— 1-pint, 9 -inch spout.....Per dozen,	10.50

Nos. 12 to 14B, one dozen in a box.
Nos. 15 to 16, half dozen in a box.

Dandy Oiler Assortment

This set contains 3 each Nos. 13, 13A, 14 and 14A Copperized Steel Oilers. Packed in a very attractive display carton. This assortment enables the dealer to supply the demand for practically any size oiler with any length of spout as all spouts are interchangeable. Weight per assortment 3½ lbs.

No. 623 Assortment.....Each. $3.80

Paull (Chace) Oilers

No.	Capacity oz.	Length Spout, in.	Per doz.
00	¾	2⅛	1.00
0	1	2⅛	1.25
1	3	3⅜	1.50
2	5	3⅜	2.00
3	8	4	2.25
4	12	4⅛	2.75
5	16	6	3.50

One dozen in a carton.

Little Wonder Assortment

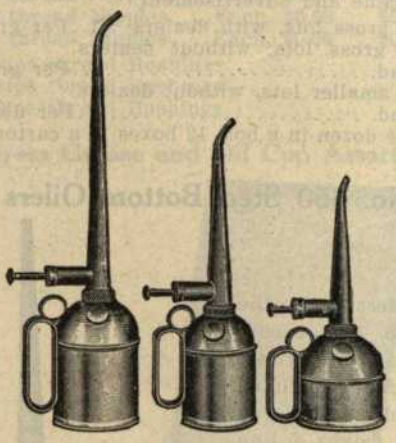
Household Oilers

Two dozen Household Oilers put up in an attractive display carton. Bodies made of one-piece tin. Tin bottoms. These Oilers are just the thing for Sewing Machines, Vacuum Cleaners, Washing Machines, Lawn Mowers, etc. Weight per assortment 2¼ lbs.

Little Wonder Assortment.....Per asst., $2.50

Pump Oilers

Cannon and Maple City Type



With this Oiler the user has perfect control of the oil and can deliver a drop or a spoonful at a stroke just as desired. Suction pipe has fine strainer, so there is no danger of the pump clogging. Spout is fastened to body very rigidly with a union nut, but can be easily removed for cleaning, etc.

Genuine Cannon

No.	Size	Diam.	Spout	Per doz.
1—Tin	1 pt.	3 in.	8 in.	$22.70
2—Tin	1½ pt.	3½ in.	12 in.	$25.40
3—Tin	1 qt.	4 in.	20 in.	$30.70

All sizes packed one-half dozen in a box.

Maple City

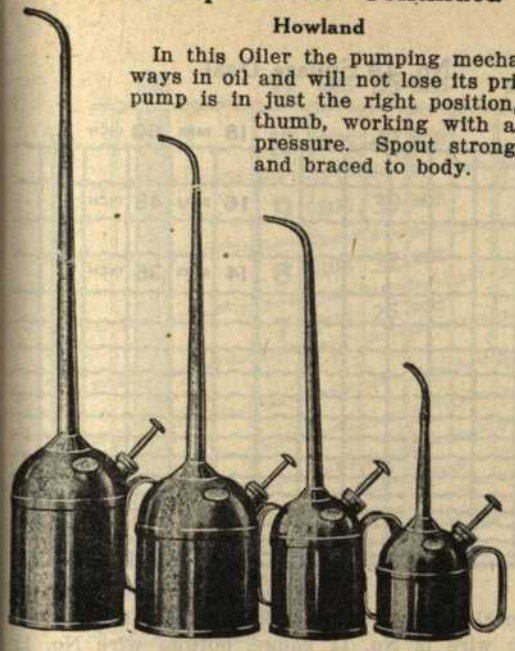
No.	Size	Diam.	Spout	Per doz.
1M—Tin	1 pt.	3 in.	8 in.	$17.50
2M—Tin	1½ pt.	3½ in.	12 in	$20.00
3M—Tin	1 qt.	4 in.	16 in.	$22.50

No. IM packed one dozen, other sizes one-half dozen in a box.

Pump Oilers—Continued

Howland

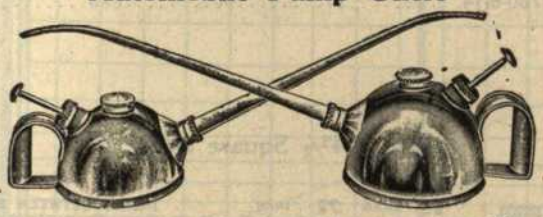
In this Oiler the pumping mechanism is always in oil and will not lose its priming. The pump is in just the right position, under the thumb, working with a downward pressure. Spout strongly soldered and braced to body.



No.	Size	Diam.	Spout	Per doz.
321—Tin	1 pt.	3 in.	8 in.	$14.50
323—Tin	1½ pt.	3½ in.	12 in.	$19.20
324—Tin	1 qt.	4 in.	12 in.	$21.50

No. 321 packed one dozen: other sizes one-half dozen in a box.

Automobile Pump Oilers



This Oiler contains the same Pump as the Howland Oiler.

All connections are made from solid bar brass, containing cut threads. The spout connection is made by means of a union nut which enables the user to adjust the spout to any position; also to interchange all spouts.

The body of the oiler is drawn seamless in one piece from 20-gauge cold rolled steel, heavily electro copper plated.

No. 801—Copperized steel, ½ pint, 3¾-inch diameter, 5-inch spout.....Per doz., $24.50

No. 804—Copperized steel, 1 pint, 4¼-inch diameter, 9-inch spout.....Per doz., $27.00

½ dozen in a box.

Engineers' Drip Oilers

Made of Tin.

No. 61—1 pint, 3-in. diameter, 12-in. spout.....Per doz., $ 9.00

No. 81—2 pint, 4-in. diameter, 16-in. spout.. ..Per doz., $11.50

No. 61, one dozen in a box.

No. 81, one-half dozen in a box.

Advertising Gallon Cans

In this Gallon Can the dealer has a splendid advertising medium. The Can is most beautifully lithographed in yellow and blue, and has a very effective ad, as shown in the cut to the left. This same ad is lithographed on all Cans, but the dealer's name and address is printed in the space for that purpose at the bottom.

This Can is of tin and thoroughly well made throughout. It has a folding wire handle, extra large screw pouring spout, also a special tin insert cap, with rubber gasket, which makes the Can perfectly tight for carrying or shipping oil. They are made to allow 2 per cent air space as required by law.

These Cans make a very attractive appearance on the dealer's shelves, and when placed with the farmer will carry your ad almost indefinitely.

Dealers are anxious, as well as we are, to have their name appear only on articles of merit. We can heartily recommend this Can to make a good impression on the farmer, not only because of its attractive appearance, but because it is well made and the spout is large.

Furnished in lots of 48 or more, printed with dealer's name and address. Each lot is carefully packed two dozen in a carton, so as to prevent scratching or marring in shipping. We can also furnish in smaller lots, without printing the name and address, if so desired.

No. 50—Gallon Cans, in lots of 48, including printing dealer's name and address..Each, $0.60

No. 50—Gallon Cans, in lots of 24, without printing. . . . . Each, $0.64

No. 50—Gallon Cans, in smaller lots, without printing. . . . . Each, $0.70

5 Gallon Oil and Gasoline Cans

The top, bottom and side shell are all welded into one piece. The welded flange at the top is turned in and forms a heavy top rim. The steel hoop around the bottom is 1¼ inches wide and extends ¼ inch below the bottom, serving as a protection and support to the whole can.

Height over all 14½ in.; diameter 11½ in.; cap diameter 2½ in.; nozzle 1¼ in. diameter, 2¾ in. long; bail ⅜ in. round iron. Capacity 5 gallons. Nicely finished in either blue for oil or red for gasoline. Weight 9 lbs.

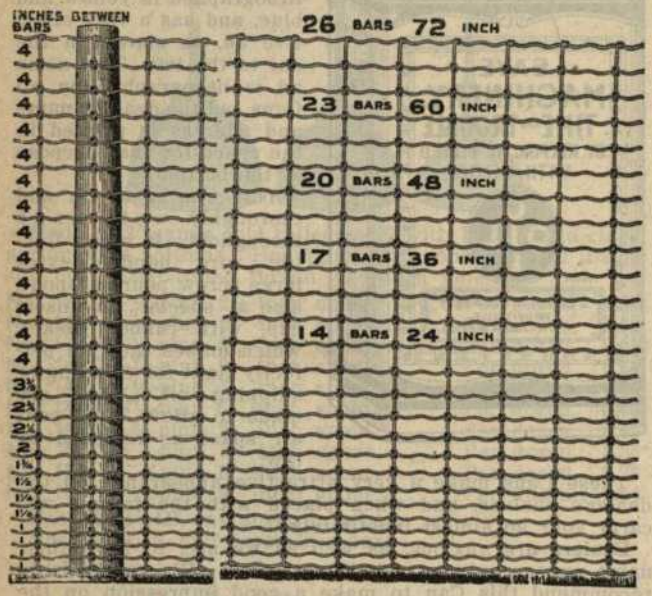
Packed three in a crate.

No. 1050—Painted Red for Gasoline. . .....Per doz., $40.00

No. 1051—Painted Blue for Oil. . . . . Per doz., $40.00

Poultry Fencing

No. 15½ Heavy Blue Ribbon



This fencing is particularly designed for chicken yards. Made with No. 12½ gauge top and bottom wires and No. 15½ gauge filler wires. 5 bottom wires spaced 1 inch apart. One piece stay wires every six inches act like pickets and hold the fencing up straight and true. The line wires are crimped to provide flexibility and springiness, to take care of the necessary expansion and contraction due to climatic changes. The knot connecting the vertical and horizontal wires is so shaped that it will not slip but provides necessary play to permit the fencing being stretched over uneven ground. The knot will not catch and hold water to rust the wires. All carefully galvanized.

	Line wires	Height, ins.	Weight Per 100 rods, lbs.	Per rod
No. 1636-6-15½.	16	36	583	.97
No. 1948-6-15½.	19	48	701	1.16
No. 2260-6-15½.	22	60	820	1.36
No. 2572-6-15½.	25	72	944	1.56

No. 17 Light Blue Ribbon

Same construction as No. 15½ except the top and bottom wires are No. 15½ gauge and the filler wires No. 17 gauge. 5 bottom wires spaced 1 inch apart. Stay wires 4 inches apart.

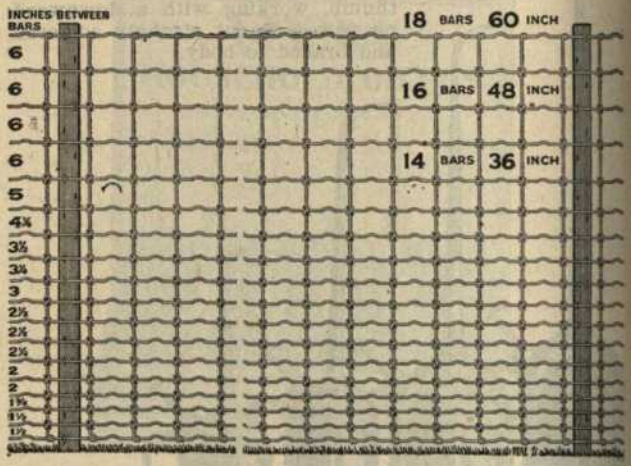
	Line wires	Height, ins.	Weight Per 100 rods, lbs.	Per rod
No. 1424-4-17.	14	24	339	.66
No. 1736-4-17.	17	36	432	.85
No. 2048-4-17.	20	48	527	1.00
No. 2360-4-17.	23	60	620	1.18
No. 2672-4-17.	26	72	714	1.35

Galvanized Staples for Poultry Fencing

We furnish only the ¾-inch size which is regularly used for Poultry Fencing. Put up in either 10-lb. boxes or full kegs of 100 lbs.

In 10-lb. boxes . . . . . Per lb., $0.17
In 100-lb. kegs . . . . . Per lb., $0.13

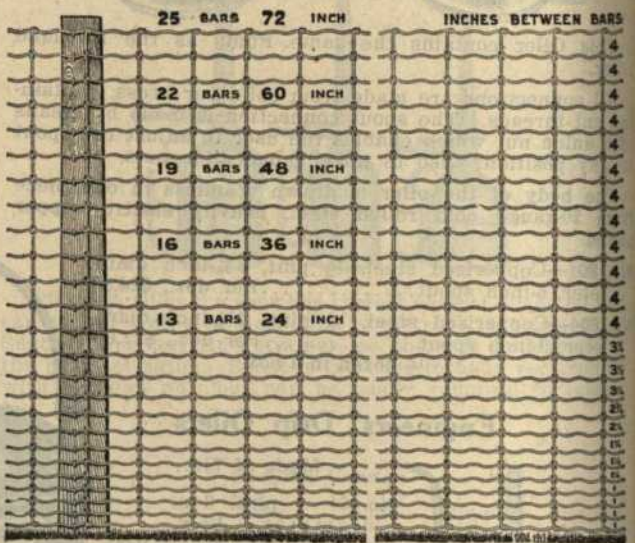
No. 14 Square Deal



Same general construction as Blue Ribbon fencing except the top wire is No. 11 gauge, bottom wire No. 12 gauge, and the filler wires No. 14 gauge. 5 bottom wires spaced 1½ inches apart. Stay wires 6 inches apart.

	Line wires	Height, ins.	Weight Per 100 rods, lbs.	Per rod
No. 1336-6-14.	13	36	645	1.02
No. 1548-6-14.	15	48	765	1.20
No. 1760-6-14.	17	60	885	1.39

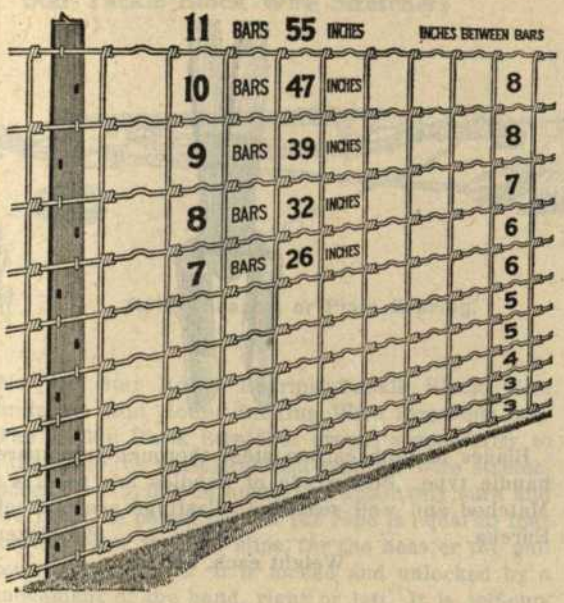
No. 14½ Square Deal



Same general construction as Blue Ribbon fencing except the top wire is No. 11 gauge, bottom wire No. 12 gauge, and the filler wires No. 14½ gauge. 5 bottom wires spaced 1 inch apart. Stay wires 6 inches apart.

	Line wires	Height, ins.	Weight Per 100 rods, lbs.	Per rod
No. 1636-6-14½.	16	36	682	1.01
No. 1948-6-14½.	19	48	820	1.22
No. 2260-6-14½.	22	60	957	1.37

Field Fencing



No. 12½ Monarch

Particularly designed for hog or field fencing. It is of the cut stay or hinge type which will hinge under heavy pressure but springs back to position when the strain is removed. Made with No. 10-gauge top and bottom wires, and No. 12½-gauge filler wires. 2 bottom wires spaced 3 inches apart. Stays are 6 inches apart. The line wires are crimped to provide flexibility and springiness, to take care of the necessary expansion and contraction due to climatic changes. All carefully galvanized.

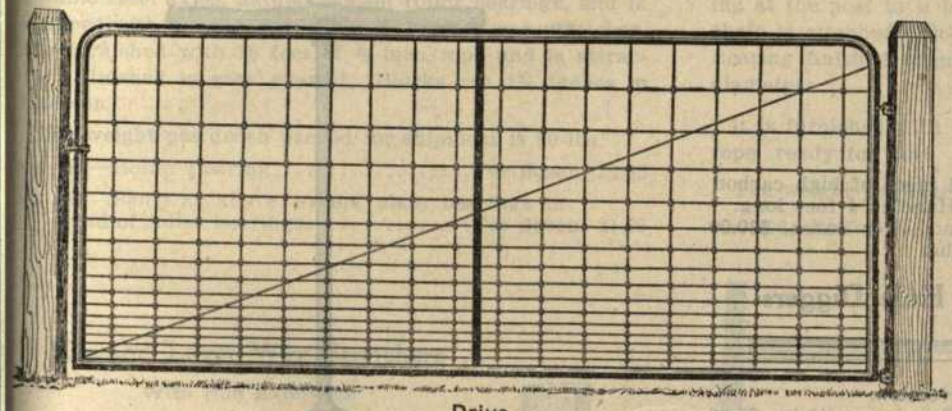
	Line wires	Height, ins.	Weight Per 100 rods, lbs.	Per rod
No. M 726-6-12½	7	26	621	.80
No. M 832-6-12½	8	32	715	.92
No. M 939-6-12½	9	39	817	1.05
No. M1047-6-12½	10	47	932	1.18

No. 11 Monarch

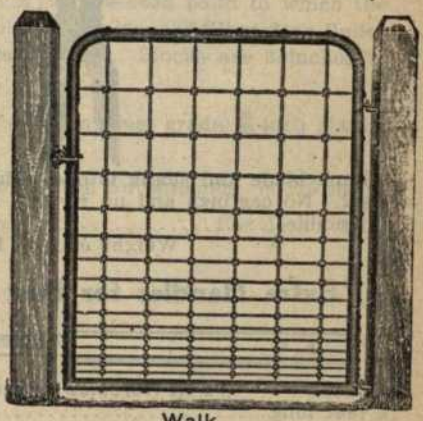
Same construction as No. 12½ except the top and bottom wires are No. 9-gauge and the filler wires No. 11-gauge. 2 bottom wires spaced 3 inches apart. Stays are 6 inches apart.

	Line wires	Height, ins.	Weight Per 100 rods, lbs.	Per rod
No. M 726-6-11	7	26	904	1.05
No. M 832-6-11	8	32	1049	1.22
No. M 939-6-11	9	39	1204	1.40
No. M1047-6-11	10	47	1370	1.58

Steel Gates



Drive



Walk

Walk

The frames are made of one continuous piece of $1\frac{1}{16}$-inch steel tubing with square reinforced bottom corners, pressed into shape under a melting heat, so are very strong. The hinges are heavy steel welded to the frame and reinforced. A heavy No. 9-gauge filler is placed within the frame. The wires pass through the tubing and are headed to hold them firmly in place. Where the wires cross they are connected by a wire knot same as used on Blue Ribbon fencing. Post bolts for the hinges and a latch are included with each gate and are securely wired to it in shipping. Prices include these attachments for wood posts. Attachments for steel posts can be furnished on special order at a slight additional cost.

	Height, ft.	Width, ft.	Weight, lbs.	Each
No. 303	3	3	17	3.60
No. 335	3	3½	19	3.75
No. 353	3½	3	19	3.75
No. 3535	3½	3½	20	3.90
No. 403	4	3	20	3.90
No. 435	4	3½	22	4.05
No. 404	4	4	24	4.20
No. 503	5	3	23	4.20
No. 535	5	3½	24	4.35

Drive

Same construction as Walk gates, except the frame is made of $1\frac{5}{16}$-inch steel tubing and they are braced in the center with a flat steel bar welded into place.

	Height, ft.	Width, ft.	Weight, lbs.	Each
No. 408	4	8	56	8.25
No. 410	4	10	69	9.25
No. 412	4	12	78	10.25
No. 4510	4½	10	69	9.50
No. 4512	4½	12	81	10.50
No. 4514	4½	14	92	11.50
No. 4516	4½	16	103	12.50

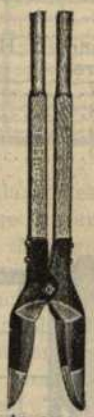
Hercules Post Hole Diggers

Blades are of high carbon steel. Castings are malleable and plenty heavy enough to stand the strain. Handles are 4 feet long.

Hercules.....Per dozen, $34.00

Weight each, 9 lbs.

Perfection Post Hole Diggers



Each blade and shank is one solid piece of high carbon steel. No castings and no rivets. Handles 4 feet long.

Invincible.....Per dozen, $30.00

Weight each, 8 lbs.

Extra Handles for Post Hole Diggers

To fit Hercules or Perfection.

4 feet long.....Per dozen sticks, $5.50

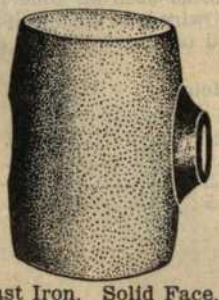
To fit Eureka.

4 feet long.....Per dozen sticks, $5.50

To fit Iwan.

1¾ feet long.....Per dozen sticks, $3.20

Post Mauls



Cast Iron. Solid Face.

Without Handle

13-lb.....Per lb., $0.12
16-lb.....Per lb., $0.12
18-lb.....Per lb., $0.12

Fitted With Handle

13-lb.....Each, $2.30
16-lb.....Each, $2.60
18-lb.....Each, $2.90

Eureka Post Hole Diggers

Split Handle

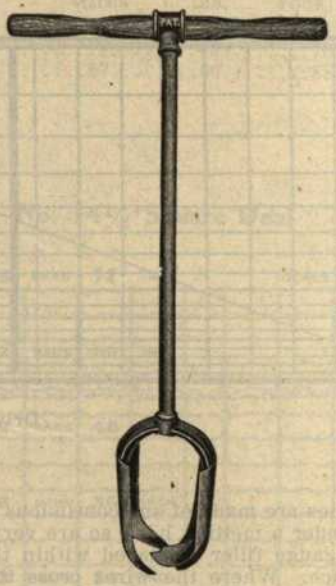
Blades of high carbon steel thoroughly tempered. Split handle type. Best grade of handles are used, 4 ft. long. Matched and well seasoned. Castings are malleable iron.

Eureka.....Per dozen, $32.70

Weight each, 9½ lbs.

Iwan Augers

For Post-holes or Wells.



This auger has met with universal satisfaction under all conditions of soil. It is effective in operation and unexcelled for easy and quick work; no suction when removed from the hole.

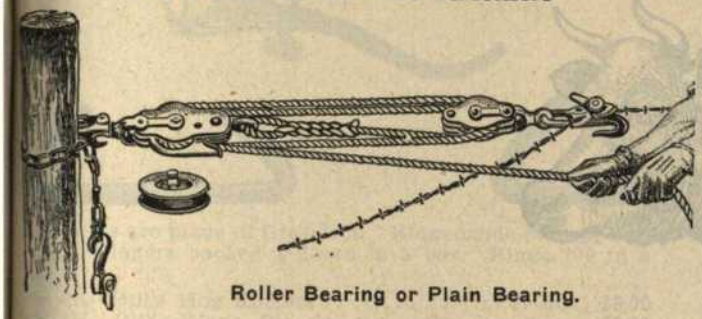
With this auger an operator can do three times as much work as with any other auger or digger now in use. The condition of ground makes no difference. Blades of high carbon steel. Malleable castings.

Total length of 12-inch size, 6 feet. All other sizes, 4 feet. The 12-inch auger is fitted with 1-inch pipe, and all other sizes with ¾-inch.

Size, ins.	4	5	6	7	8	9	10	12
Wt. each.	7	7¼	8½	9½	10	10¼	11½	22
Per doz..	28.00	28.00	28.00	30.00	30.00	32.00	36.00	96.00

Wire Stretchers

Star Tackle Block Wire Stretchers



Roller Bearing or Plain Bearing.

The No. 482 Star Roller Bearing Tackle Block Wire Stretcher is the first Roller Bearing Wire Stretcher ever made. The Tackle Block Stretcher owes its popularity to the fact that it is the most practical type for wire stretching purposes. It is quick in operation, absolutely sure and very powerful. One pound pull on the rope is equal to four pounds on the wire. It never slips, for the heavier the pull the better the lock holds. It is locked and unlocked by a simple movement of the hand, right or left. It is self-supporting from the post. It can also be successfully used as a hoist of 1,000 pounds capacity.

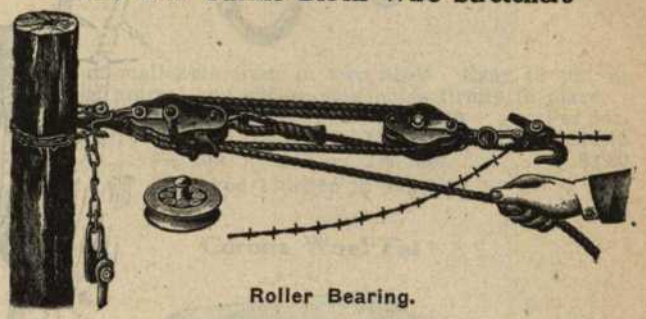
The Star Roller Bearing Tackle Block Wire Stretcher is made with steel blocks and malleable straps. It has removable steel axles, hardened steel roller bearings, and is equipped with the best wire clamps ever put on a stretcher. It is furnished with 16 feet of ⅜-inch rope and is attractively finished in gray enamel. Blocks are 2⅜ inches in diameter.

The weight per dozen packed for shipment is 80 lbs.

No. 482—Roller Bearing.....Per dozen, 22.95

No. 483—Same as above, except plain bearings instead of roller bearings.....Per dozen, 21.60

Giant Star Tackle Block Wire Stretchers



Roller Bearing.

This Stretcher is like the Star Roller Bearing Stretcher No. 482, except it is of heavier design. It has steel blocks, with strong, reinforced, malleable yokes attached to the axle pins, reinforced steel axles held in place with cotter pins and removable if desired, and furnished with hardened steel roller bearings and a heavy swivel, making it easy to always have the block in a convenient position. The latest design of strong, heavy wire clamp is used. This Stretcher is two in one—a heavy stretcher and a reliable Giant Star Hoist, with 1,500 pounds capacity.

The lock on these stretchers—the vital part of any Tackle Block Wire Stretcher—is made of malleable iron. These stretchers, like all Star Stretchers, are self-supporting at the post by a heavy arrow-head point to which the chain is attached. Blocks on the No. 498 Giant Star Roller Bearing finished in gray enamel. Blocks are 3 inches in diameter.

It is furnished with 20 feet of best grade ½-inch Manila rope, ready for use.

The weight per dozen, packed for shipment, is 110 lbs.

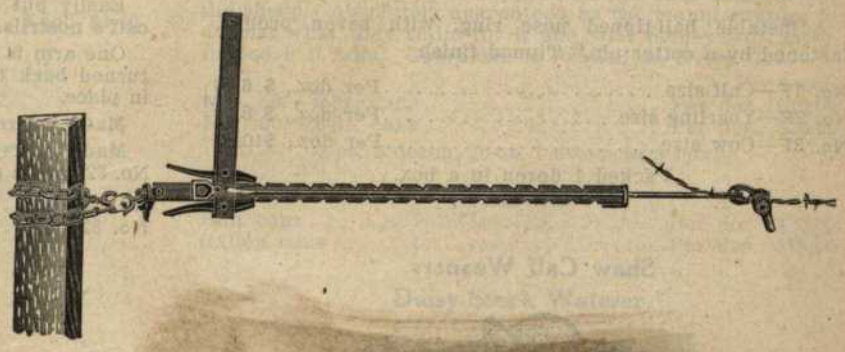
No. 498—Roller Bearing.....Per dozen, 43.20

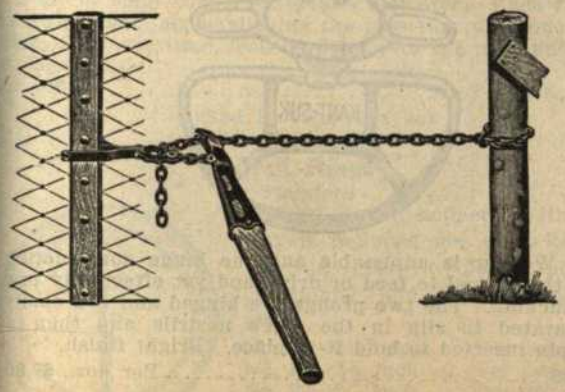
Ellwood Lever Wire Stretchers

With Rod Extension

The pioneer of wire stretchers. Great strength, ease of operation and simplicity have given it a well known reputation. Weight per dozen, 60 lbs.

No. 191.....Per dozen, 16.20





Sampson Woven Wire Stretchers

This Stretcher is strong enough to sustain any pull and has enough power to stretch any length of fence desired.

Very simple in operation and construction and works perfectly. Every movement of the handle stretches the wire several inches.

The grip engages the chain firmly and is easily moved when slackened.

Clamping bars are 4 feet 6 inches long and handle is 5 feet long, all of hardwood. Each Stretcher includes 8 feet of ⅜-inch tested chain. Weight, complete, 35 lbs.

No. 200.....Each, 8.10

For Star Hoists, see Page No. 238.

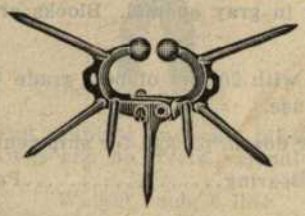
Dudek Animal Pokes

This Poke has many advantages over the ordinary Cow Poke. Is made heavier, and is very simple and durable. Has no springs to get out of order. It is constructed of four pieces of forged steel coupled together by specially made pins, which are held in place by spring cotters. The prongs are long and sharp and the hooks at each end of Poke are made long to prevent easy slipping through the fence. This Poke was perfected by a stockraiser and absolutely does the work. A very popular seller. Packed 6 in a bundle.

No. 21—Calf size.....Per doz., $11.00
No. 22—Cow size.....Per doz., $11.00
No. 23—Bull size.....Per doz., $12.00

No. 21 weighs 35 lbs.; No. 22, 41 lbs.; No. 23, 48 lbs. per dozen.

Porcupine Calf Weaners

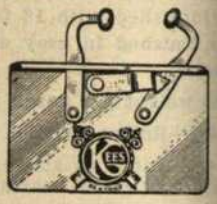


Adjustable ball-tipped nose ring, with seven prongs, fastened by a cotter pin. Tinned finish.

No. 1F—Calf size.....Per doz., $ 6.50
No. 2F—Yearling size.....Per doz., $ 8.50
No. 3F—Cow size.....Per doz., $10.50

Packed 1 dozen in a box.

Kees Calf Weaners



Easily put on. Simply open it up and close it on the calf's nostrils. Cannot injure cow, calf or other stock.

One arm is riveted solid to the plate. The other can be turned back to open. A small flat spring holds this arm in place.

Made entirely of stamped steel, galvanized.

Made in two sizes; No. 727 has a plate 3x4¾ ins. and No. 828 has a plate 3¾x5⅝ ins.

No. 727.....Per doz., $2.80
No. 828.....Per doz., $3.20

Packed 1 dozen in a box.

Shaw Calf Weaners

A well-known Basket Calf Weaner which has given satisfactory results. Will permit feeding and prevent sucking. Halter included with Weaner. Tinned finish.

No. 1—Calf size.....Per doz., $ 7.50
No. 2—Yearling size.....Per doz., $ 8.40
No. 3—Cow size.....Per doz., $10.50

Nos. 1 and 2 packed 1 dozen, No. 3 ½ dozen in a box.

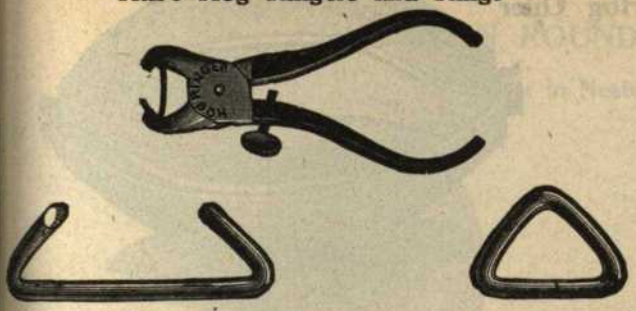
Kant-Suk Calf Weaners

This Weaner is adjustable and the hinge construction allows the animal to feed or drink and yet effectually prevents sucking. The two prongs are hinged and can easily be separated to slip in the calf's nostrils and then a cotter pin inserted to hold it in place. Bright finish.

No. 1055.....Per doz., $7.80

Packed 1 dozen in a box.

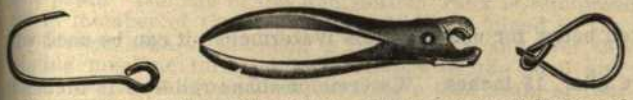
Hill's Hog Ringers and Rings



Ringers are made of Gray Iron. Rings made of Coppered Wire. Ringers packed 1 dozen in a box. Rings 100 in a box.

No. 2R—Hill's Hog Ringers . . . . . Per doz., $3.00
No. 1H—Hill's Rings, Pig size. . . . . Per doz. boxes, $2.00
No. 2H—Hill's Rings, Shoat size. . . . . Per doz. boxes, $2.00
No. 3H—Hill's Rings, Hog size. . . . . Per doz. boxes, $2.00

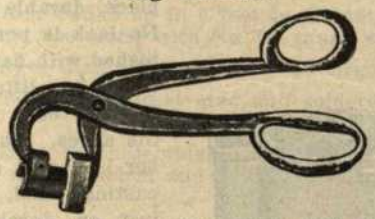
Perfect Hog Ringers and Rings



Ringers are made of Gray Iron. Rings made of Coppered Wire. Ringers packed 1 dozen in a box. Rings 100 in a box.

No. 037GR—Hog Ringer . . . . . Per doz., $3.20
No. 137PR—Pig Rings . . . . . Per doz. boxes, $3.00
No. 337SR—Shoat Rings . . . . . Per doz. boxes, $3.00
No. 237HR—Hog rings . . . . . Per doz. boxes, $3.00

Hog Tamers



Made of malleable iron with hardwood block, and includes three sets of crucible steel knives.

Hog Tamers . . . . . Each, $1.40

Bull Rings

Self-Piercing

Made of solid copper. 2½-inch diameter. Each ring is its own punch, accomplishing the insertion with one operation. It saves time, lessens danger to the user and pain to the animal.

No. 1891 . . . . . Per doz., $7.00

Packed 1 dozen in a box.

Bull Rings

Standard

Made of solid copper. With each ring is included one steel key for piercing. Easy to put in nostrils of animal and holds firmly in place.

No. 20—2½-inch. . . . . Per doz., $6.20
No. 21—2¾-inch. . . . . Per doz., $6.50
No. 22—3 -inch. . . . . Per doz., $6.90

Packed 1 dozen in a box.

Perfect Cattle Leaders

Made of malleable iron, in two sizes. Easy to put in nostrils of animal and spring ring holds firmly in place.

No.	Length	Inside Width	Per doz.
1	4⅝ ins.	1⅝ ins.	$3.10
2	4⅞ ins.	2⅜ ins.	$3.60

Packed 1 dozen in a box.

Corona Wool Fat

Corona will assist nature in the worst cases of cracked hoof, grease heel, scratches, corns, gall shoulder, barb wire cuts, sore cow's teats, as well as all other hoof and skin diseases known to the animal kingdom.

No farmer or stock owner should be without this preparation which nature has supplied in the skin and wool of the sheep. Absolutely guaranteed by the manufacturers to do just what they claim for it and your money will be refunded if it fails. **Guarantee is Printed on Every Can.**

Per dozen

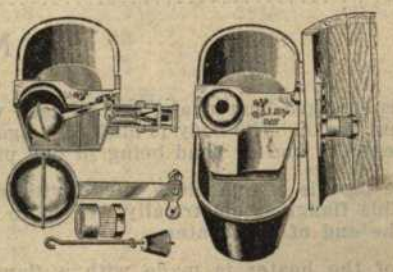
No. 50— 8-oz. cans . . . . . Per doz., $10.00
No. 100—20-oz. cans . . . . . Per doz., $20.00

8-oz. 2 dozen, 20-oz. 1 dozen in a box.

Pine Tar

Pint cans . . . . . Per doz., $ 3.60
Gallon cans . . . . . Per doz., $18.00

Daisy Stock Waterer



Made of gray iron. Working parts are made of brass, and are all on the outside of the supply tank, except the valve. The valve is made of hard rubber and fits perfectly in the valve seat just like a cork, making it impossible for the valve to leak. The Daisy can be adjusted to a pipe, thus enabling one to water stock in another lot away from the supply tank. Weight each, 13 lbs. Packed 4 in a carton.

Daisy Stock Waterer . . . . . Per doz., $42.00

Watermelon Hog Oiler

Cut above shows the Watermelon in operation.

Made from genuine pig iron throughout, cast in only three pieces. The basin is solid and will never leak. The oiler proper revolves on bearings at each end, so constructed as to make warping and binding absolutely impossible. Hogs cannot get the Watermelon Hog Oiler out of adjustment, no matter how rough the treatment.

The ribs on the Watermelon carry the oil to all parts and at the same time afford a natural drainage of any surplus oil back into the basin.

Mud and foreign substance cannot get into the oil as sufficient clearance only is arranged for the passing of the ribs inside of the base. Any rain water is forced by its weight to the bottom of the reservoir and out through a drain pipe on the outside of the basin above oil line. Changing oil is unnecessary and refilling or attention is governed only by the size of herd.

While we recommend the Special Oil for Hog Oilers as listed below for use with this Watermelon, it can be used with any kind of oil or liquid disinfectant.

Weight of entire oiler complete, 70 pounds. Height of entire oiler, 18 inches. Watermelon-shape roller is 15 inches in diameter, and is 24 inches long. Basin holds 2 gallons of oil.

Watermelon Hog Oiler only.....Each, $18.70

Special Hog Joy Oil for Hog Oilers

For use in any patented Hog Oiler or can be used in a spray. Kills all parasites and skin diseases of hogs. In two colors, light and dark.

	Dark	Light
Cases (12 1-gal. cans).....Per case,	$12.00	$13.20
5-gal. cans.....Per gal.,	$ 0.74	$ 0.84
Iron bbls., half bbls. or ¼ bbls, containers extra.....Per gal.,	$ 0.50	$ 0.60

Nourse's Crude Oil

For use in Hog Oilers in place of special oil. Desired by some on account of price.

Iron barrels, half barrels or ¼ barrels, containers extra.....Per gal., $0.30

Extras for Containers

Returnable at Same Price.

Steel quarter barrels.....$4.00
Steel half barrels.....$5.00
Steel barrels.....$7.00

No. 220 Tank Heater

The Black Jack Tank Heater is made of cast iron. The body is one piece, durable and heavy. No leak is possible. Furnished with flat grate. The entire top lifts off, allowing the easy removal of the ashes. The air chamber is a part of the body casting and, therefore, just as durable as any other part of the heater.

Furnished with Heat Deflector when desired at an extra charge. This retards the heat going up the flue and makes the heater more efficient.

Height, 24 ins.; diameter, 14 ins.; shipping weight, 115 lbs.

No. 220.....Each, $18.00
Heat Deflector, extra.$2.30

No. 691 Tank Heater

This is a submerged heater, and can be used with wood, iron or cement tanks. The body is made of 14-gauge boiler iron, all except the end or head being in one piece.

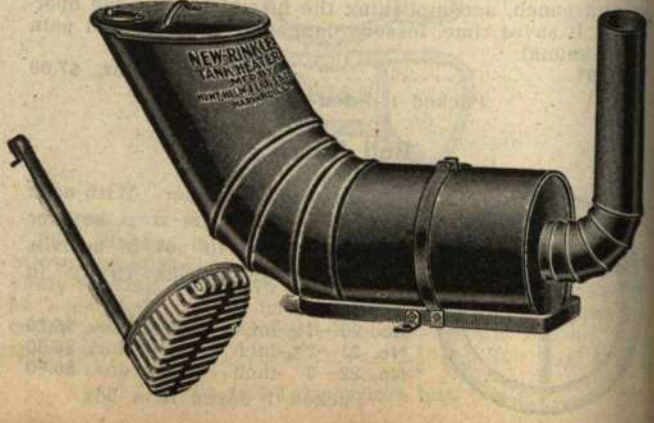
The smoke pipe is of one piece, made with a flange at the base. This flange is electrically welded to the inside surface of the end of the heater.

The end of the heater is made with a flange or rim which is welded to the inner surface of the body. This construction makes it into one solid piece without seams.

The grate shown in the illustration hangs in the heater.

This heater measures 24 inches high; weight, 95 lbs.

No. 691.....Each, $24.00



COLUMBIAN ROUND RED BOTTOM TANKS

Order in Nests and Save Freight

The material used throughout the Columbian Red Bottom Tank is of the highest quality, tight coated. Costco galvanized steel—both bottom and shell. That part of it which is most subjected to corrosive action, the bottom and lower edge of the shell, is thoroughly coated (over the galvanizing) with a special rust-resisting, metal preservative red pigment paint. The rim of the Red Bottom Tank is reinforced and made rigid with the Columbian Patent Tube Top. The bottom member of the Red Bottom Tank is joined to the shell by the standard Columbian Double Lock Seam method. The bottom edge of the shell is flanged out, and over this flange is hooked the U-flange of the bottom. Then a special flanging machine turns both the flange of the shell and the flange of the bottom upward and presses them tightly against the shell of the tank, forming a lock seam of four plies of steel. All seams are soldered by the Columbian Sweating-in Process, whereby the solder is soaked into the seams and not just piled on top as with the old method. The shell of the Red Bottom Tank is strengthened with a new triple swedge near the top and another near the bottom, both running the circumference of the tank. Stamped in the shell of each Columbian Red Bottom Tank with a steel embossing die are the words, "Warranted For Five Years," together with the name Columbian Steel Tank Company, Kansas City, Missouri. Unless so stamped it is not a genuine Columbian Red Bottom Tank. This is a guarantee from the manufacturer expressing his faith in the Red Bottom Tank. It is a "steel bound" warranty. It is embossed in the steel of the tank itself where it cannot wear off or get lost. Its manufacturer stands behind the Red Bottom Tank and will make good any and all defects that may develop in the service for which intended.

Red Bottom Tanks up to 6 feet in diameter by 2 feet high are made of No. 24 gauge galvanized steel. Sizes larger than 6x2 round are made with No. 20 gauge galvanized steel bottoms. Capacities are figured at 31½ gallons to the barrel.

Tanks larger than 8 ft. x 2 ft. are too large to ship set up and are made in halves and shipped as knocked down tanks.

Galvanized angles are riveted and soldered on the inside of each half, along the edges of the sides and across the bottom.

These tanks are assembled at the factory and holes are properly matched and then taken down for shipping. Bolts and packing are furnished and when angles are bolted together and drawn up tank is made water tight.

LIST ON ROUND RED BOTTOM STOCK TANKS

No.	Diameter, Feet	Height, Feet	Capacity, Barrels	Approx. Weight, Lbs.	List Price
R31	3	1	1½	30	10.80
R315	3	1½	2¼	40	11.60
R32	3	2	3	45	12.30
R325	3	2½	3¾	50	14.10
R33	3	3	4½	55	15.90
R352	3½	2	4	50	14.00
R3525	3½	2½	5	65	16.10
R353	3½	3	6	70	18.20
R42	4	2	5	51	15.80
R425	4	2½	6¾	65	18.00
R43	4	3	8	75	20.40
R452	4½	2	7	62	17.70
R4525	4½	2½	8¾	70	20.30
R453	4½	3	10½	90	22.80
R52	5	2	8½	70	20.00
R525	5	2½	10¾	80	23.00
R53	5	3	13	90	26.10
R552	5½	2	10½	76	22.50
R5525	5½	2½	13¼	95	26.30
R553	5½	3	15¾	110	30.00
R62	6	2	12½	82	25.50
R625	6	2½	15¾	95	29.40
R63	6	3	19	115	33.30
R652	6½	2	14¾	101	28.80
R6525	6½	2½	18½	115	32.90
R653	6½	3	22¼	130	36.90
R72	7	2	17¼	125	32.30
R725	7	2½	21½	135	36.30
R73	7	3	26	145	40.40
R752	7½	2	20	150	37.10
R7525	7½	2½	25	160	41.30
R753	7½	3	30	170	45.50
R82	8	2	22¾	170	42.00
R825	8	2½	28½	210	62.80
R83	8	3	34¼	230	68.90
R92	9	2	29	250	67.90
R925	9	2½	36¼	275	74.00
R93	9	3	43½	295	80.10
R102	10	2	36	292	79.00
R103	10	3	54	342	95.20
R112	11	2	43¾	335	93.20
R113	11	3	65½	395	111.40
R122	12	2	52	380	108.40
R123	12	3	78¼	440	128.70
R132	13	2	61¼	430	125.60
R133	13	3	92	496	147.80
R142	14	2	71¼	490	145.80
R143	14	3	107	560	170.10
R152	15	2	82	540	168.10
R153	15	3	123	630	196.40
R162	16	2	93½	585	192.40
R163	16	3	140	700	222.80

COLUMBIAN ROUND END RED BOTTOM TANKS

Out of the popular demand and wide sale of Columbian Round Red Bottom Tanks sprang a demand for a similar tank of round-end design. The oblong shape permits extending the tank through the corral fence, thus furnishing water to two or more pens of stock. This design is especially adapted for cooling tank service around the dairy. The Columbian Round-End Red Bottom Tank is now in production under the same manufacturing and merchandising methods that made famous in a year the Round Red Bottom Tank. These tanks are made with the same care and high grade material as the Round Red Bottom Tanks. Instead of the swedges or corrugations for reinforcing, the Round End Tanks have angle irons placed at intervals up and down on the larger sizes and tied across the top with angle bars. They carry the same five-year guarantee as the Round Red Bottom Tanks. Round End Red Bottom Tanks up to 4x2x8 are made of No. 24 gauge galvanized steel. Sizes larger than 4x2x8 are made of No. 20 gauge galvanized steel.

LIST ON ROUND END RED BOTTOM TANKS

No.	Width, Feet	Depth, Feet	Length, Feet	Capacity, Bbls.	Weight, Lbs.	List Price
RE224	2	2	4	3	52	12.60
RE225	2	2	5	3¾	61	15.20
RE226	2	2	6	4½	75	17.70
RE227	2	2	7	5½	87	20.30
RE228	2	2	8	6¼	97	22.80
RE2210	2	2	10	8	120	27.90
RE2254	2	2½	4	3¾	60	14.10
RE2255	2	2½	5	4¾	68	17.10
RE2256	2	2½	6	5¾	82	20.10
RE2257	2	2½	7	7	95	23.10
RE2258	2	2½	8	8	112	26.10
RE22510	2	2½	10	10¼	130	32.10
RE2524	2½	2	4	3¾	60	14.10
RE2525	2½	2	5	4¾	66	17.00
RE2526	2½	2	6	5¾	80	19.80
RE2527	2½	2	7	7	91	22.70
RE2528	2½	2	8	8	103	25.50
RE25210	2½	2	10	10¼	110	31.20
RE25254	2½	2½	4	4½	70	16.50
RE25255	2½	2½	5	5½	76	19.80
RE25256	2½	2½	6	7¼	90	23.10
RE25257	2½	2½	7	8¾	103	26.40
RE25258	2½	2½	8	10	117	29.70
RE252510	2½	2½	10	12¾	145	36.30
RE325	3	2	5	5½	79	18.60
RE326	3	2	6	7	92	21.80
RE327	3	2	7	8¼	105	24.90
RE328	3	2	8	9½	117	28.10
RE3210	3	2	10	12¼	146	34.40
RE3212	3	2	12	15	175	41.00
RE3214	3	2	14	17¾	250	47.30
RE3255	3	2½	5	7	90	21.60
RE3256	3	2½	6	8¾	105	25.20
RE3257	3	2½	7	10¼	120	28.80
RE3258	3	2½	8	12	133	32.40
RE32510	3	2½	10	15½	165	39.60
RE32512	3	2½	12	18¾	195	47.10
RE32514	3	2½	14	22	215	54.20
RE3525	3½	2	5	6½	85	20.70
RE3526	3½	2	6	8	97	23.70
RE3527	3½	2	7	9¾	109	27.20
RE3528	3½	2	8	11¼	127	30.60
RE35210	3½	2	10	14¼	145	37.50
RE35212	3½	2	12	17½	163	44.70
RE35214	3½	2	14	20¾	183	51.60
RE35255	3½	2½	5	8	90	23.40
RE35256	3½	2½	6	10	95	27.20
RE35257	3½	2½	7	12	102	30.90
RE35258	3½	2½	8	13¾	120	34.70
RE352510	3½	2½	10	18	140	42.20
RE352512	3½	2½	12	22	150	50.00
RE352514	3½	2½	14	26	175	57.50
RE428	4	2	8	12¾	137	32.40
RE4210	4	2	10	16¼	170	39.30
RE4212	4	2	12	20	200	46.50
RE4214	4	2	14	23½	240	53.40
RE4216	4	2	16	27¼	280	60.30
RE4258	4	2½	8	15¾	155	37.10
RE42510	4	2½	10	20½	195	44.90
RE42512	4	2½	12	25	230	53.00
RE42514	4	2½	14	29½	280	60.80
RE42516	4	2½	16	34	310	68.60
RE438	4	3	8	19	175	41.70
RE4310	4	3	10	24½	215	50.40
RE4312	4	3	12	30	260	59.40
RE4314	4	3	14	35½	300	68.10
RE4316	4	3	16	41	345	76.80
RE528	5	2	8	15½	155	37.50
RE5210	5	2	10	20	195	45.20
RE5212	5	2	12	24¾	235	53.10
RE5214	5	2	14	29¼	270	60.80
RE5216	5	2	16	33¾	310	68.40

HOW TO SHIP TANKS.

Round End Red Bottom Tanks which the freight classification will permit loading through a car door 6 feet wide by 7 feet 6 inches high, shipped singly, take double first class freight. If shipped nested, knocked down or sectioned, they take first class rate of freight, provided all sections and parts will pass through a car door of the size named above. Round Tanks 7½ feet in diameter by 3 feet deep or 8 feet in diameter by 2 feet deep are the largest that can be shipped set up at actual weight.

The largest storage tanks that may be shipped at actual weight are 7½ feet by 6 feet or 6x8 feet. Larger sizes take a 4-000-lb. minimum charge at first class rate of freight for the entire shipment.

On the Round End Red Bottom Tanks, single tanks shipped set up take a double first class rate of freight. The tanks larger than 8x2 feet are too large to ship set up and are made in halves and shipped as knocked down tanks.

By nesting two or more, either Round End, Round Red Bottom Tanks or Storage Tanks, that is, placing one within the other, as shown in illustration on page 555, a first class rate of freight is obtainable. A saving of practically one-half in freight is effected. In ordering tanks to nest, diameter only need be taken into consideration. The diameter must scale down so that each tank will fit within the one just larger. If two tanks of the same size—as an example 8x2—are wanted in a nest, one of them must be made about 1 inch smaller than the other.

STANDARD NESTS

COLUMBIAN ROUND RED BOTTOM TANKS

Below are listed three popular nests of Columbian Round Red Bottom Tanks on which the factory maintains prompt shipping service at all times. These are the regular Round Red Bottom Tanks as described on previous pages, but in assembling great quantities of these particular nests a saving is made which enables us to make a freight allowance on orders for these nests.

Nest No. 85
Consisting of

1 8 x2	List,	42.00
1 7½x2	List,	37.10
1 7 x2	List,	32.30
1 6½x2	List,	28.80
1 6 x2	List,	25.50
1 5 x2	List,	20.00
6 Tanks	List,	185.70

Weight per nest, 740 lbs.

Nest No. 83
Consisting of

1 8x2	List,	42.00
1 7x2	List,	32.30
1 6x2	List,	25.50
1 5x2	List,	20.00
1 4x2	List,	15.80
1 3x2	List,	12.30
6 Tanks	List,	147.90

Weight per nest, 540 lbs.

This illustrates the manner of nesting tanks for shipment.

Nest No. 63
Consisting of

2 6x2	List,	51.00
2 4x2	List,	31.60
2 3x2	List,	24.60
6 Tanks	List,	107.20

Weight per nest, 330 lbs.

COLUMBIAN ROUND END RED BOTTOM TANKS

Below are listed four popular nests of Columbian Round End Red Bottom Tanks, on which the factory maintains prompt shipping service at all times. These are the regular Round End Red Bottom Tanks as described on previous pages, but in assembling great quantities of these particular nests a saving is made which enables us to make a freight allowance on orders for these nests.

Nest No. 45RE
Consisting of

1 4x2x10	List,	39.30
1 4x2x14	List,	53.40
1 5x2x16	List,	68.40
3 Tanks	List,	161.10

Weight per nest, 755 lbs.

Nest No. 23RE
Consisting of

1 2 x2x4	List,	12.60
1 2 x2x5	List,	15.20
1 2 x2x6	List,	17.70
1 2½x2x5	List,	17.00
1 3 x2x5	List,	18.60
1 3 x2x6	List,	21.80
6 Tanks	List,	102.90

Weight per nest, 405 lbs.

Nest No. 22RE
Consisting of

2 2x2x4	List,	25.20
1 2x2x5	List,	15.20
1 2x2x6	List,	17.70
1 2x2x7	List,	20.30
1 2x2x8	List,	22.80
6 Tanks	List,	101.20

Weight per nest, 365 lbs.

Nest No. 253RE
Consisting of

2 2½x2x 8	List,	51.00
2 3 x2x 8	List,	56.20
2 3 x2x10	List,	68.80
6 Tanks	List,	176.00

Weight per nest, 760 lbs.

COLUMBIAN BOTTOMLESS STOCK TANKS

Bottomless Tanks are designed especially for those desiring large capacities and enables the user to obtain a large capacity at a very low price. These tanks are shipped knocked down in one or more rolls, or in sections, according to gauge of material used. No solder or rivets are needed for setting them up, as they are put together with galvanized bolts and packing, which makes seams thoroughly tight.

The list prices are based on 20 gauge galvanized steel; for larger than 20 ft. diameter we recommend heavier gauges. Add 30 per cent to list price for each heavier gauge.

List No.	Diameter, Feet	Height, Feet	Weight, Lbs.	List Price	List No.	Diameter, Feet	Height, Feet	Weight, Lbs.	List Price	List No.	Diameter, Feet	Height, Feet	Weight, Lbs.	List Price
B63	6	3	100	16.80	B163	16	3	255	44.60	B263	26	3	415	72.50
B83	8	3	130	22.40	B183	18	3	290	50.30	B283	28	3	440	78.20
B103	10	3	160	27.90	B203	20	3	320	55.80	B303	30	3	490	83.70
B123	12	3	175	33.50	B223	22	3	350	61.40	B323	32	3	525	89.30
B143	14	3	225	39.00	B243	24	3	380	66.90	B343	34	3	550	94.80

COLUMBIAN STORAGE TANKS

Columbian storage tanks are furnished in all capacities in both welded and riveted construction. For water storage the riveted and soldered construction is recommended, but for the storage of gasoline, oils and liquids of light gravity we recommend the welded construction. Storage tanks may be shipped set up, in sections or completely knocked down. (See shipping instructions on tanks on page 554.) Storage tanks can be nested and thus take the low rate of freight. Welded tanks quoted on application.

Columbian Storage Tanks Ready for Shipment

The Columbian way of shipping knocked-down tanks has eliminated practically all the difficulties encountered in setting up, and, aside from soldering, any kind of labor can easily erect these tanks.

The body or shell of the tank is in one roll. This shell is fitted with angle irons on each end to be bolted together in erecting. All seams in the shell are riveted and reinforced complete at the factory, except the one connecting the ends. Bottoms are usually shipped in one piece, complete, together with rivets, solder and instructions for erecting, the latter being shipped in a separate box. Equipped with 1-inch brass drain flange.

LIST ON STORAGE TANKS

List prices shown here are based on No. 20 gauge galvanized steel. For No. 18 gauge, add 30%; for No. 16 gauge, add 60% to these list prices. Welded Tanks will be charged at nominal extra cost over riveted.

No.	Diameter, Feet	Height, Feet	Capacity, Barrels	Weight, Lbs.	List Price
S44	4	4	10¾	130	24.80
S45	4	5	13½	145	29.60
S46	4	6	16¼	165	34.40
S47	4	7	19	190	39.20
S475	4	7½	20½	195	41.00
S48	4	8	21¾	208	44.00
S410	4	10	27¼	225	53.00
S454	4½	4	14	133	27.80
S455	4½	5	17¼	155	33.20
S456	4½	6	20¾	180	38.00
S457	4½	7	24½	200	44.00
S4575	4½	7½	26¼	215	46.70
S458	4½	8	28	225	49.40
S4510	4½	10	35	275	60.20
S54	5	4	17¼	155	31.50
S55	5	5	21¾	170	37.40
S56	5	6	26	185	43.20
S57	5	7	30¼	210	49.10
S575	5	7½	32½	225	52.10
S58	5	8	34¾	240	55.10
S554	5½	4	21	172	36.00
S555	5½	5	26½	200	42.80
S556	5½	6	31½	230	49.50
S557	5½	7	37	245	56.30
S5575	5½	7½	39¼	265	59.70
S558	5½	8	42½	287	63.00
S5510	5½	10	53	345	76.50
S64	6	4	25¼	205	43.50
S65	6	5	31½	235	51.20
S66	6	6	38	265	58.80
S67	6	7	44¼	280	66.50
S675	6	7½	47½	300	70.40
S68	6	8	53	330	74.10
S610	6	10	67¼	370	89.40
S654	6½	4	29¾	250	49.50
S655	6½	5	37¾	275	57.60
S656	6½	6	44¾	300	65.70
S657	6½	7	55	325	73.80
S6575	6½	7½	59	350	78.00
S658	6½	8	63	375	81.90
S6510	6½	10	78¾	400	98.10
S74	7	4	31¼	235	55.50
S75	7	5	43½	265	64.10
S76	7	6	52½	300	72.80
S77	7	7	63¾	335	81.50
S775	7	7½	68½	350	85.80
S78	7	8	73	375	90.20
S710	7	10	91¼	450	107.60
S84	8	4	47	300	67.50
S85	8	5	59½	355	77.40
S86	8	6	71¼	440	87.30
S87	8	7	83½	475	97.20
S875	8	7½	89½	500	102.20
S88	8	8	95¼	525	107.10
S810	8	10	119¼	615	126.90
S94	9	4	60¼	420	79.50
S95	9	5	75½	460	90.80
S96	9	6	90½	500	102.00
S97	9	7	105¼	540	113.30
S975	9	7½	113¼	580	119.00
S98	9	8	128¾	620	124.50
S910	9	10	151	650	147.00
S104	10	4	74½	450	92.30
S105	10	5	93	480	104.40
S106	10	6	111¾	500	116.60
S107	10	7	130½	530	128.70
S1075	10	7½	139¾	580	134.90
S108	10	8	149	635	140.90
S1010	10	10	186½	740	165.00

TANK COVERS.

Covers are made of 20-gauge galvanized steel, with single riveted and soldered seams. The conical type of cover is naturally stronger than the flat in the same gauge of metal. Covers are equipped with 14-inch manhole unless otherwise ordered. In ordering covers always state whether conical or flat top is wanted, also if cover is to fit loose or tight.

Flat.

No.	Diam., Feet	Weight, Lbs.	List Price
M3	3	14	9.30
M35	3½	18	10.80
M4	4	23	12.50
M45	4½	29	14.30
M5	5	35	16.20
M55	5½	42	18.50
M6	6	50	20.90

Conical.

No.	Diam., Feet	Weight, Lbs.	List Price
M65	6½	57	23.40
M7	7	65	26.10
M75	7½	72	29.00
M8	8	85	32.00
M9	9	100	38.60
M10	10	135	45.80

Deduct 3.80 from list if manhole is not wanted.

COLUMBIAN ROUND END WAGON TANKS

These tanks are made of 20 gauge galvanized steel with flat top. Can also be furnished with board for pump at a slight additional cost. Manhole is 14 inches in diameter, and is provided with heavy splash boards inside to prevent contents splashing back and forth. They are also tapped with 2-inch pipe in one end near the bottom.

Furnished in two grades. No. W. O. B. has double lock seam bottom. No. W. A. B. has double lock seam bottom with an angle iron to give additional strength. Prices are for 20 gauge. Add 30% to list prices for each heavier gauge. Orders must specify grade wanted, as different discounts apply to list prices shown.

No.	Width, Feet	Height, Feet	Length, Feet	Capacity, Bbls.	Weight, Lbs.	List Price
REW226	2	2	6	4½	128	30.00
REW228	2	2	8	6¼	142	34.50
REW2528	2½	2	8	8	159	39.00
REW25210	2½	2	10	10¼	165	45.00
REW328	3	2	8	9½	171	44.30
REW3210	3	2	10	12¼	210	48.30
REW32510	3	2½	10	15	280	54.00

Pumps Boards furnished at 1.50 extra.

COLUMBIAN THRESHERMAN'S FAVORITE WAGON TANK

This style of wagon tank is used by the farmer or thresherman when something low priced and durable is wanted. It is equipped with woodwork silling and bolsters, 2-inch outlet flange and pump board and 14-inch manhole, same as Threshermen's Special, but the woodwork shown on top of this tank is only furnished at an extra cost of 9.50 net. List prices are based on No. 18 gauge galvanized steel body and No. 16 gauge heads. The prices below do not include woodwork above tank. Add 30% to list prices for each heavier gauge.

Capacity. Barrels	Length, Ft.	Weight, Lbs.	List Price
10	8	300	60.00
12	8	325	70.00

COLUMBIAN THRESHERMAN'S SPECIAL WAGON TANKS

Used extensively by threshermen, contractors, etc. Made of 16 gauge galvanized steel body and 14 gauge heads. Can be furnished with either riveted and soldered or welded construction. Mounted on 4x6-inch sills and 5x6-inch bolsters, which will fit any farm gear. Has 2x8-inch woodwork bolted on around the top. These tanks are fitted with 2-inch brass outlet threaded for pipe on rear end, also 14-inch manhole with cover and a strong bulkhead to prevent splashing of contents. Orders must specify whether riveted or welded construction is wanted, as different discounts apply to list prices shown.

Capacity. Barrels	Length, Ft.	Weight, Lbs.	List Price
10	8	500	95.00
12	8	550	103.00
15	8	600	122.00

COLUMBIAN UTILITY WAGON TANKS

All Steel Construction

The body of the tank is made of 16 gauge galvanized steel with 14 gauge heads. A bulkhead is built inside the tank in the center to prevent splashing and surging of the contents. Every seam is welded—absolutely no solder or rivets used.

This illustration shows steel sideboards above the tank. When steel sideboards are used we usually furnish a 14-inch manhole with lid on top of the tank. When top of tank is left plain we furnish a 3½-inch threaded fill flange and plug with double acting vent. This mounting will, however, be made to suit the purchaser. These tanks are equipped with a 2-inch threaded outlet flange in rear. Can be furnished in either black steel, painted or in galvanized steel. Always state which is wanted, as they take a different discount from list prices shown. Equipped with steel bolsters, making it unnecessary to have extra silling.

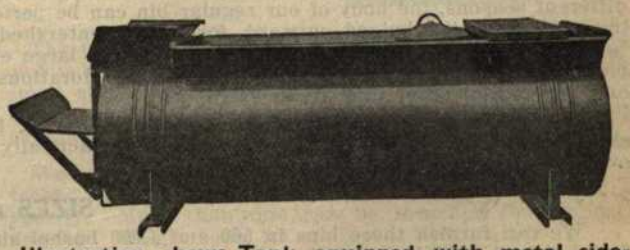


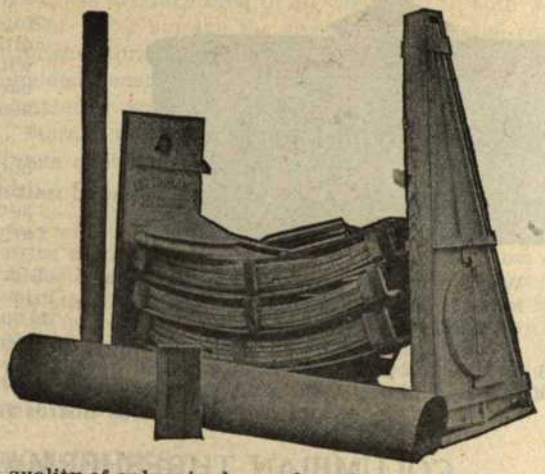
Illustration shows Tank equipped with metal sideboards, which are furnished only on special order at an extra price.

Capacity. Barrels	Length, Ft.	Weight, Lbs.	List Price
10	8	373	114.00
12	8	420	123.60
15	8	470	146.40

For Sideboards, add 10.00 net extra.

COLUMBIAN STYLE "A" METAL GRAIN BIN

For Telegraph Code See Page Front of Index.



The Columbian Style A Metal Grain Bin is made of the best quality of galvanized open hearth steel, No. 20-gauge in the body, 24-gauge bottom and No. 26-gauge roof. It is made in sections, a sheet 33 inches wide after being flanged, and 75 inches long, comprising a section of the body. Each sheet is punched, flanged and formed on accurately gauged machinery. The sections are joined by mortising the single flange of one section into the double flange of the next and securely bolting through the three and five plies of metal thus formed in the joint. These joints stand out at right angles to the body of the bin and form a rigid reinforcement impossible to obtain in any other manner. This method of construction makes the erection an easy matter and also makes the addition of other sections practical in increasing the size of the bin.

The bottom is formed and riveted into one single piece, accurately trimmed to fit into the bottom flange of the body where it is securely bolted, making an absolutely tight joint.

The roof is conical in shape and sectional in construction, the sections being joined by a high standing box joint securely bolted. This joint gives the roof proper stiffness and renders it water-tight. With the roof is furnished a cap which affords ventilation. In one section of the roof a large opening, covered by an extra roof section, is provided, making it possible to fill the bin directly from the thresher. The top section of the body is double flanged, giving added strength and offering a secure fastening for the roof. The sides are vertically corrugated between the flanged ribs, giving tremendous strength to the most vital part of the bin.

EQUIPMENT.

Columbian Style A Metal Grain Bin is equipped with a large 5x2-foot metal door, which is provided with a hasp for locking. This door is fitted snugly into a heavy metal frame that is securely mortised and bolted to the body of the bin. The frame is mortised on the inside to receive metal door boards which are furnished with each bin. These are placed in position much the same as the slip-in endgate of a wagon. In one of the metal door boards is an opening having sliding door and spout. A collapsible metal shoveling board is furnished to fit in the same groove as the door boards. This allows the grain to run down only as fast as it is removed and prevents waste. One perforated ventilating tube is furnished, but others may be had at a slight additional cost. In the top section of the bin a 22-inch porthole with sliding door is provided. This is convenient for filling or emptying the bin.

All bolts, tools and instructions for erecting are packed with each bin. By following instructions two men can erect these bins in a few hours' time. The smaller size bins can be placed on skids and hauled to any part of the farm.

THE JOINT

There are three plies of metal all the way round the bin and five plies where vertical seams intersect and lap.

MANNER OF SHIPPING

The bin is knocked down for shipment. Shipped in this manner, it takes a third class rate of freight in less than car lots and carload rate is fifth class. (Crated for long hauls only.)

VENTILATION

Where an all-purpose bin is wanted for storing different grains such as corn, wheat, oats, barley, kaffir, etc., in different seasons, the body of our regular bin can be perforated. These perforations are crescent in shape, the upper lip of the crescent being bulged outward, forming a watershed over the opening. The opening thus made is ⅝ inch long by ⅛ inch at the widest point. This opening is not large enough to permit the smallest grains to fall through, yet gives plenty of ventilation for very damp grain. Perforations are spaced on 3-inch centers. This perforating is furnished only on special order and at an extra price.

One 6-inch perforated ventilating shaft for placing in the center of the bin under the ventilating cap is regularly shipped with each bin. This is sufficient for practically any grain. If more than one ventilating shaft is wanted, however, we can furnish at a slight additional cost.

SIZES AND PRICES

We can furnish these bins in 500 and 1,000 bushel sizes. The 500 bushel size is 9 ft. 7 inches in diameter and 8 ft. 3 inches high, weight approximately 800 lbs. The 1,000 bushel size is 13 ft. 6 inches in diameter and 8 ft. 3 inches high, weight approximately 1150 lbs.

500 bu. Style A Metal Grain Bins complete as outlined above	Each, $103.00
1000 bu. Style A Metal Grain Bins complete as outlined above	Each, $150.00
Extra Ventilating Shafts	Each, $6.00
Extra for perforating either size Bin	Each, $6.00

Heavier and Larger Metal Grain Bins

We are also in position to furnish Metal Grain Bins made of heavier material than Style A also in practically any size wanted. Full information furnished on request.

COLUMBIAN WELL TUBING AND CONDUCTOR PIPE

Screw Joint

Slip Joint

Columbian Galvanized Steel Well Casing and Conductor Pipe is made in lengths up to 10 feet, inclusive, without cross seams.

The 8-ft. lengths are easiest handled. They may be joined together in 16-ft. lengths, leaving only one cross seam, and are less liable to break in hauling, or drop to the bottom of the well, as the short lengths often do when riveted together for longer lengths.

One end of each slip joint has a swedge and is slightly tapered, and both ends have heavy lugs for wiring together.

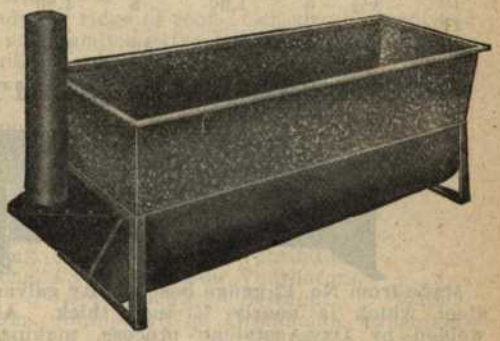
Price is per hundred feet on Casing and Conductor Pipe, set-up, and applies to either pattern. Weight is per hundred feet.

Size, Inches	26-Gauge Wgt. lbs.	26-Gauge 100 ft.	24-Gauge Wgt. lbs.	24-Gauge 100 ft.	22-Gauge Wgt. lbs.	22-Gauge 100 ft.	20-Gauge Wgt. lbs.	20-Gauge 100 ft.
5	130	28.80	170	32.60	200	36.60	240	41.40
5½	146	30.90	192	35.00	225	39.30	275	44.90
6	156	34.10	206	38.60	241	43.50	292	49.20
6½	170	36.00	222	40.80	260	46.10	315	52.10
7	180	38.10	235	43.40	275	48.80	333	55.40
7½	191	42.20	252	47.60	294	53.40	357	60.90
8	203	45.30	266	51.00	312	57.15	380	64.50

COLUMBIAN COMBINATION FEED COOKER AND SCALDING VAT

The vat of this cooker is made of No. 20-gauge galvanized steel. It will not burn out, if bottom of vat is kept covered with water. An extra perforated bottom is provided to keep the contents from sticking to the bottom of the vat. It is 24 inches wide at the bottom, 30 inches wide at the top, 18 inches deep and 6 feet long. A drain plug is placed in the side near the bottom for convenience in draining the vat. The top is reinforced with angle iron, and wrought iron chain hooks are provided on both sides. Vat is removable from the furnace.

The furnace is made of black range steel, 15 inches deep and 6 feet long. It is mounted on heavy angle iron legs and an angle iron is placed around the top on the inside for the vat to rest on. Has oval bottom and firebox extends the full length of the vat. Grates for burning coal are furnished, when desired. Equipped with heavy draft door and damper, also 4 feet of smoke stack furnished with each outfit.



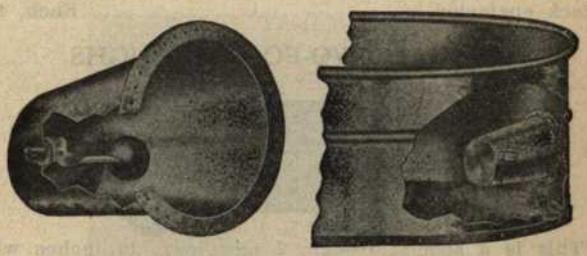
	Weight, lbs.	Each
Combination Feed Cooker and Scalding Vat, without grates	190	40.00
Grates extra	20	7.00
Flat cover to fit over vat, extra	30	6.00

COLUMBIAN IMPROVED STOCK FOUNTAIN

Made in two sections with four drink openings. It is sanitary and easy to clean and does away with the old sour barrel that often was the means of spreading diseases among the stock. Can be connected with supply tank or filled direct from pump.

No.	Dia. Top, ins.	Height, inches	Capacity, gallons	Weight, lbs.	Each
301	25	24	29	22	12.50
302	25	30	37	24	13.00
303	30	30	55	35	14.00
304	40	30	92	50	18.00
305	42	36	110	60	20.00
306	48	36	150	80	25.00

COLUMBIAN HOG WATERERS



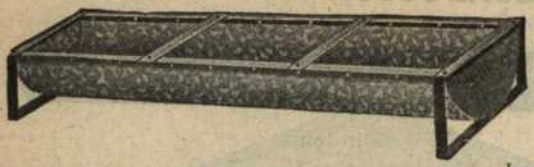
The Columbian Hog Waterer can be fitted to any style of stock tank. It provides an automatic fountain for the small stock, chickens, hogs, etc. The fittings are all of brass and the float of zinc—nothing to rust or get out of order.

We can furnish this Waterer either separately or attached to tank ready for use when orders for tank so specify. More than one can be attached to a tank if desired. Weight each, 8 lbs.

Columbian Hog Waterer attached to tank.....Each, 4.50
Columbian Hog Waterer not attached to tank..Each, 3.50

For other Waterers, see Index.

COLUMBIAN HOG TROUGHS (Round Bottom)



This style of galvanized hog trough can be furnished in any size desired. Sizes up to 14 inches wide and 7 inches deep have a double folded metal top rim. 18 inches wide and 9 inches deep and larger have steel tube top rim, which makes them strong and rigid and presents no sharp edges to injure the stock.

Special prices quoted on sizes not listed below.

Length in feet and price each.

Width, ins.	Depth, ins.	3-foot Wgt. lbs.	3-foot Each	4-foot Wgt. lbs.	4-foot Each	5-foot Wgt. lbs.	5-foot Each	6-foot Wgt. lbs.	6-foot Each	8-foot Wgt. lbs.	8-foot Each	10-foot Wgt. lbs.	10-foot Each
12	6	15	4.70	19	5.70	23	6.70	27	7.70	34	9.50	43	11.30
14	7	18	5.80	23	6.80	28	7.80	34	8.80	44	10.80	53	12.80
18	9	32	7.60	36	8.60	40	9.00	45	10.80	54	13.40	65	16.00
18	12	34	8.70	40	10.20	46	11.60	54	13.10	65	16.50	75	19.80
24	12	42	9.50	50	10.90	58	12.30	65	13.70	73	16.90	80	20.10
30	15	58	11.50	64	13.10	70	14.70	78	16.30	95	19.90	112	22.50
36	18	66	13.50	80	15.50	94	17.50	110	19.50	125	23.90	145	28.30

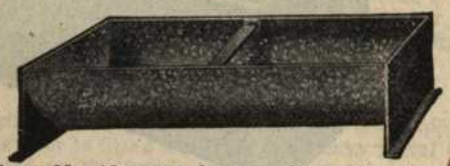
COLUMBIAN STYLE "A" FEED TROUGHS

This is a light-weight, low-priced, popular hog trough, made of galvanized steel throughout. Substantial, durable and easily cleaned. Has cross bar every 12 inches, which adds much to the strength of the trough and prevents the waste of food.

Length in feet and price each.

Width, ins.	Depth, ins.	2-foot Wgt. lbs.	2-foot Each	3-foot Wgt. lbs.	3-foot Each	4-foot Wgt. lbs.	4-foot Each	5-foot Wgt. lbs.	5-foot Each	6-foot Wgt. lbs.	6-foot Each	8-foot Wgt. lbs.	8-foot Each	10-foot Wgt. lbs.	10-foot Each
10	4½	5	1.60	6	1.80	7	2.05	....	....	..	....	..	....	.	....
11	5	..	....	..	....	....	....	9	3.20	10	4.10	13	5.80	15	6.60
12	6	7	2.30	10	2.90	12½	3.50	15½	4.05	18	4.60	24	5.80	30	6.90

"INDESTRUCTO" WELDED SEAM TROUGHS



Made from No. 12 gauge best quality galvanized or black steel which is nearly ⅛ inch thick. All seams are welded by Oxy-Acetylene process, making a one-piece Trough. No rivets or solder are used. Absolutely sanitary. Round bottom makes them easy to clean. Will last a lifetime.

Furnished either in galvanized or black-baked enamel in one size. Width, 10 inches. Depth, 5 inches. Length, 2 ft. Weight, 15 lbs.

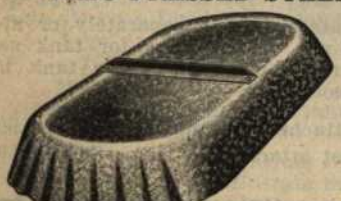
Galvanized . . . . . Each, 5.10
Black enameled. . . . . Each, 4.10

SPECIAL TWO-FOOT TROUGHS

This is a special trough, 2 feet long, 12 inches wide and 6 inches deep. Made of galvanized steel. Holes are provided in each leg for anchoring to stakes. Weight, 7 lbs.

Special Two-Foot Troughs. . . . . Each, 2.00

NEIO PRESSED STEEL HOG TROUGHS



Made from one piece 24-gauge galvanized steel. Inside of trough smooth, no seams or soldered joints, eliminating the usual corners and cracks where germs collect. Has outside corrugated apron or shield all the way round, giving a substantial base, which makes it practically impossible to upset. 12 inches wide, 4½ inches deep, 2 feet long. These troughs nest solid in shipping, thus saving in freight. They take 4th class rate of freight. Nest of 12 weighs 77 lbs.

No. NEIO. . . . . Per doz., **$22.80**

COLUMBIAN MULTI-HOG FEEDER

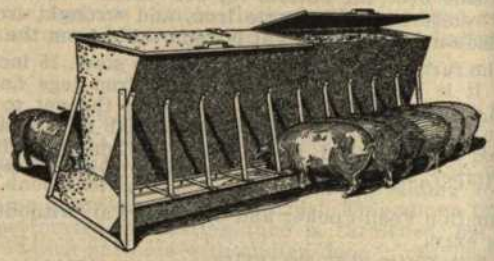


Illustration Shows No. B

This all-metal sanitary feeder meets the demand of those who wish a feeder that will successfully and economically feed a large number of hogs. It is particularly adapted to the feeding of stock tonics and the dry feeds. The hopper is wide at the top and narrow at the bottom, allowing the feed to run down only as fast as it is used up. Two troughs are provided with a cross bar every 12 inches. This prevents the hogs from shoving along the trough and wasting the feed. Hopper is made smooth inside so that there is no danger of the food clogging. Holes are provided in legs to permit anchoring to the feed floor or to stakes. Made of the best grade of galvanized steel, clean, durable and economical.

Made in two styles. No. B is shown in the illustration and has a large hopper thoroughly reinforced with upright bracing bars. No. A is same as No. B only smaller and does not need the upright braces.

No. A

Length, feet	Capacity, bushels	Weight lbs.	Each
4	2½	55	20.10
6	4	90	24.60
8	6	130	30.00
10	8	175	37.80

No. B

Length, feet	Capacity, bushels	Weight lbs.	Each
4	10	110	40.00
6	15	160	55.00
8	20	210	67.50
10	25	275	80.00

Star Ventilators

Manufactured especially for us by the best known ventilator manufacturer in America. The measurements of the flues, angles and band are scientifically correct. It will siphon the foul air out of the building on which it is placed. It can be used in connection with the guaranteed King Siphon Ventilating System.

Made of the best grade of copper bearing, heavy rust-resisting steel and finished with a satin silver aluminum, which stays bright for years. Its architecture harmonizes with any building. A wonderfully beautiful ornament.

Star Ventilators are furnished complete ready to attach to the roof with weather vanes, cardinal points (N., E., S., W.), ball, rod and cone without extra charge.

An important feature that is sometimes overlooked is the size of Ventilator required. Based on years of careful study, the factory recommends the following equipment:

For barns 32 to 36 feet wide:
40 to 50 ft. long, 1 No. 400 Star Ventilator.
60 to 72 ft. long, 2 No. 400 Star Ventilators.
80 to 100 ft. long, 3 No. 400 Star Ventilators.
For barns 30 feet wide or less use the smaller size.
For barns over 36 feet wide use the larger size.

No.	Flue Diam.	Base at Roof	Base Moulding	Approximate Shipping Wgt.	Each
350	28 in.	47x47 in.	50x50 in.	240 lbs.	57.00
400	30 in.	52x52 in.	54x54 in.	280 lbs.	60.00
500	36 in.	62x62 in.	63x63 in.	350 lbs.	76.00

Lightning Rod Attachments for Star Ventilator..... 5.00

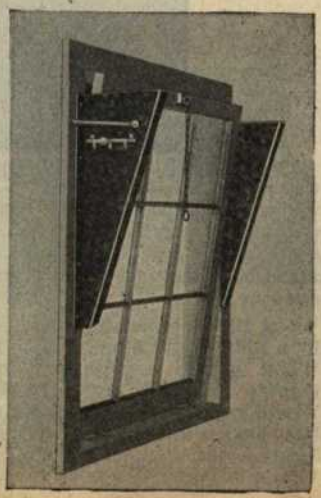
Weather Vanes furnished with Star Ventilators without extra charge. We can furnish Horse, Cow, Mule, Bull, Automobile, Hog, Rooster, Sheep, Holstein Cow, Holstein Bull or Arrow. Specify design with each order.

Star Window Guards

For Ventilation

These Guards are made of galvanized steel. They are fitted with bolts which permit the window being opened to three different angles. Each guard has an iron brace for keeping them rigid, and the lower edge is turned in, so the window cannot swing past. These guards are 27 inches long and 10½ inches wide at the top. Weight per pair. 5 lbs. No windows included.

No. 721.....Per pair, 3.00



Model H Star Ventilators

Same as the Star Ventilator without the base on the roof. For Hog Houses, Poultry Houses, Garages, where economy is the deciding factor. A good Ventilator at a low price. Always shipped without ornaments unless ornaments are specified.

Regularly made for ridge of roof. Can also be furnished for side of roof at a nominal extra cost. Order must specify the pitch of roof.

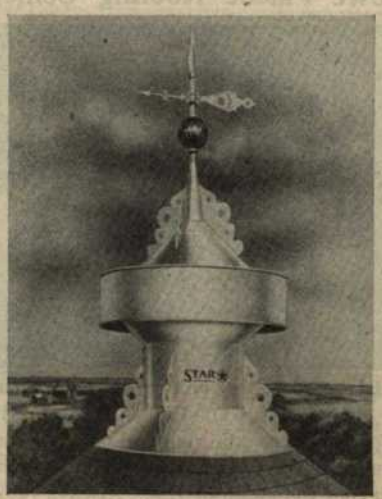
Proper Sizes to Use for Hog Houses.

16 to 20 feet wide.
20 to 40 ft. long, 2 No. H 16 Star Ventilators.
42 to 60 ft. long, 2 No. H 20 Star Ventilators.
62 to 90 ft. long, 3 No. H 20 Star Ventilators.
22 to 26 feet wide.
24 to 30 ft. long, 2 No. H 16 Star Ventilators.
32 to 50 ft. long, 2 No. H 20 Star Ventilators.
52 to 70 ft. long, 3 No. H 20 Star Ventilators.
72 to 90 ft. long, 4 No. H 20 Star Ventilators.

No.	Flue Dia.	Approximate Shipping Wgt.	Without Ornaments	With Ornaments
H 13.	13 in.	50 lbs.	17.60	20.60
H 16.	16 in.	65 lbs.	22.80	25.80
H 20.	20 in.	80 lbs.	28.40	31.40

Always shipped without Ornaments unless otherwise specified. For Lightning Rods on Model H Star 3.00 extra.

Star Silo Ventilators



Made similar to large Star No. 350 Ventilator except the base is not included and they are furnished regularly without the ornaments and weather vane.

No.	Flue Diam.	For Silo, Diam.	Approximate Shipping Weight	Each
2.	16 in.	12 ft.	85 lbs.	19.00
3.	20 in.	14 ft.	100 lbs.	22.00
4.	24 in.	16 ft.	125 lbs.	25.00
5.	28 in.	18 ft.	150 lbs.	28.00

Prepared Roofing

Prepared Roofings fill all the functions of a roof covering, including fire protection, better and at a lower cost than any competing material on the market.

We can furnish this roofing in five grades, which will take care of practically all classes of work. This roofing is strictly high quality and each grade will give good satisfaction for its intended purpose.

Sisco Red or Green Rock Roofing

SISCO Red or Green Rock Roofings are scientifically made—they meet all the demands required of a roof covering. Sisco roofings are made by saturating a tough fibrous felt with pure water-proof asphalt. The felt is then sealed with a weather-defying asphalt coating into which is imbedded natural colored red or green rock, which adds to its life as well as to the texture and beauty of the finished product. Packed in rolls 108 square feet each, complete with nails and cement for laying. Shipping weight, 80 lbs. per square.

Sisco Red Rock Roofing.....Per square, Market
Sisco Green Rock Roofing.....Per square, Market

Sisco Hercules Roofing

SISCO Hercules Roofing is the heaviest thick roofing produced. It is almost twice as thick and heavy as ordinary 3-ply roofing. It is made on a base of the heaviest, toughest fibrous felt obtainable; thoroughly water-proofed with high-grade water-proofing asphalt and uniformly coated on both sides with an asphalt coating, made from a combination of asphalts, each one of which was selected because of its particular ability to withstand all weather conditions. Into this coating fine sand is firmly imbedded, adding to its wearing qualities and assisting it to withstand sudden changes in temperature. Packed in rolls 32 ins. wide, 108 sq. ft. to roll, complete with cement and nails. Shipping weight. 90 lbs. per square.

Sisco Hercules Roofing.....Per square, Market

Popular Roofing

POPULAR Roofing is a strictly high-grade "rubber finish" roofing. The manufacturers claim it to be the equal of any roofing on the market of a similar weight and finish and unhesitatingly recommend it to anyone wanting good plain substantial roofing at a moderate price. Packed in rolls containing 108 square feet, 32 ins. wide, complete with nails and cement. Furnished in 1, 2 or 3-ply. Weight 1-ply, 35 lbs.; 2-ply, 45 lbs.; 3-ply, 55 lbs. per square.

Popular Roofing.....Per square, Market

Standard Roofing

STANDARD Roofing is better than the price indicates. Good for any building of a more or less temporary nature. Packed in rolls 108 sq. ft., 32 ins. wide, complete with nails and cement. Furnished in 1, 2 or 3-ply. Weight 1-ply, 35 lbs.; 2-ply, 45 lbs.; 3-ply, 55 lbs. per square.

Standard Roofing.....Per square, Market

Asphalt Shingles

Asphalt Shingles are fast taking the place of other roof coverings, especially for residences. They are extremely ornamental and their weather-proof and fire-resisting qualities make them a very desirable roof. Made of same materials as Sisco Red or Green Rock Roofing. Furnished in slabs of four shingles each, either square edged or round corner tile design, red or green color. Packed in crates, two crates to the square. Shipping weight 200 lbs. per square.

Asphalt Red Rock Shingles.....Per square, Market
Asphalt Green Rock Shingles.....Per square, Market

Stowe Plastic Roofing Cement

Made of best grade of heavy waterproofing oils and long, tough strands of Canadian Asbestos Fibre. Absolutely waterproof; does not require skilled labor to apply. It will stick to any surface. Can be applied in hot or cold weather. No roof too steep or flat. Always remains plastic and pliable. Will not run in hot weather.

Wood Bbls. containing from 550 to 575 lbs....Per lb., $0.15
Iron Bbls. containing from 550 to 575 lbs.....Per lb., $0.16
Wood ½ Bbls. containing from 350 to 375 lbs..Per lb., $0.16
Iron ½ Bbls. containing from 350 to 375 lbs..Per lb., $0.17
Wood kegs containing from 100 to 150 lbs....Per lb., $0.18
Iron kegs containing from 100 to 150 lbs.....Per lb., $0.19
25-pound cans.....Per lb., $0.20
1-pound cans, 36 cans to the case.....Per lb., $0.35

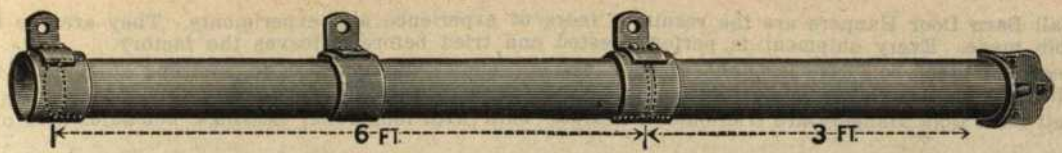
Stowe Liquid Roofing Cement

Made of pitch, creosote and durable elastic oils, and Canadian Asbestos Fibre.

For repairing leaky, worn out roofs. Works equally well on tin, corrugated iron, felt, composition, gravel or concrete. One coat will change an old leaky roof into a one-piece weather-and-water proof roof that is practically as good as new.

Wood Bbls. containing from 55 to 60 gallons.Per gal., $1.50
Iron Bbls. containing from 55 to 60 gallons...Per gal., $1.60
Wood ½ Bbls. containing from 35 to 38 gals.Per gal., $1.60
Iron ½ Bbls. containing from 36 to 38 gals.Per gal., $1.80
Wood kegs containing 15 gals.....Per gal., $1.90
Iron kegs containing 15 gallons.....Per gal., $2.00
5-gallon cans.....Per gal., $2.00
1-gallons cans, 6 cans to the case.....Per gal., $2.40

CANNON BALL DOOR TRACK

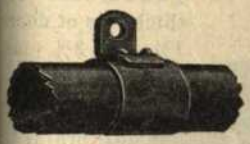


Cannon Ball Track is the result of years of experience in manufacturing Door Tracks. This track is manufactured of 14-gauge steel, specially formed and slotted ¼-inch on the under side to take the hanger frame. It is made in 3, 4, 6 and 8-ft. sections, 2¼ ins. in diameter, inside measurement. The sections are rigidly joined together by No. 12-gauge steel splices 2½ ins. wide, within which the section ends meet at the center splice and lock. Attached to the splices are heavy brackets made from 1½x¼-in. steel for supporting the track at the side of the building. It is bird-proof and weather-proof, and dirt will not lodge in it. 3-ft. lengths furnished in crates of 96 feet; 4, 6 and 8-ft. lengths, assorted, in crates of 100 feet.

Besides the end bracket and the center bracket or joint splice, we also furnish intermediate brackets to be used in the center of the pieces of track as an additional support. Track weighs 215 lbs. per 100 ft.

No. 681—Cannon Ball Door Track in 4, 6 or 8-ft. lengths.....Per 100 ft., 27.00
No. 387—Cannon Ball Door Track in 3-ft lengths.....Per 100 ft., 31.50

BRACKETS FOR CANNON BALL TRACK



No. 682.

The Center Bracket shown above is required to splice the track and support it at the joints. The rivet heads are on the under side, into which the notches cut on the upper side of the track fit. This prevents the track from turning.

Weight of Center Track Brackets, per crate 4 dozen, 44 lbs.

No. 682...Per doz., 2.40

No. 683.

No. 683 Intermediate Brackets are used to support sections of Cannon Ball Track longer than 3 feet. They differ only from the No. 682 in that they can be slipped along the track as desired, whereas the No. 682 brackets connect and support the track at the joints only. Weight of Intermediate Brackets per crate of 4 dozen. 46 lbs.

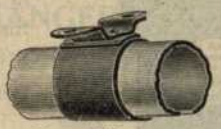
No. 683...Per doz., 2.40

No. 680. No. 1059

Cut above illustrates the End Track Brackets which are used to close up the ends of the track as well as to support it. These brackets enclose the track completely and help make the track bird, dirt and weather proof. No. 1059 answers same purpose as No. 680.

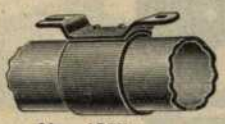
Weight of the End Brackets per crate of 2 dozen, 15 lbs.

No. 680..Per doz., 2.10
No. 1059..Per doz., 2.10



No. 1055

No. 1056



No. 1057

No. 1058

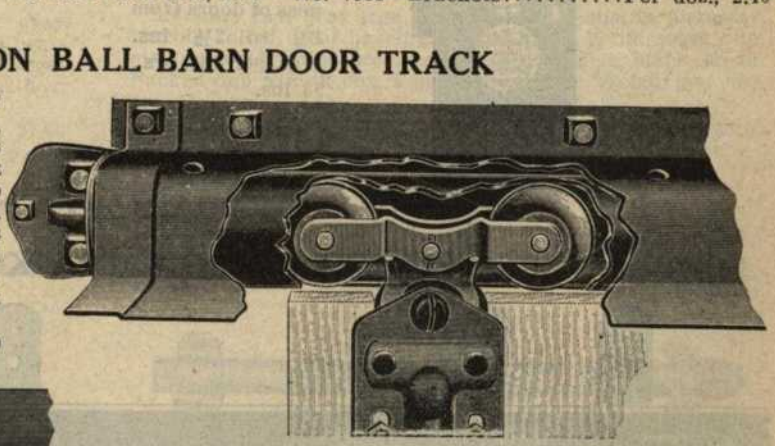
Nos. 1055 and 1057 are same as No. 682, and Nos. 1056 and 1058 are same as No. 683, except arranged so the bracket attaches to ceiling. These hangers can also be used for parallel rows of track, if desired. Weight per crate of 4 dozen, 45 lbs.

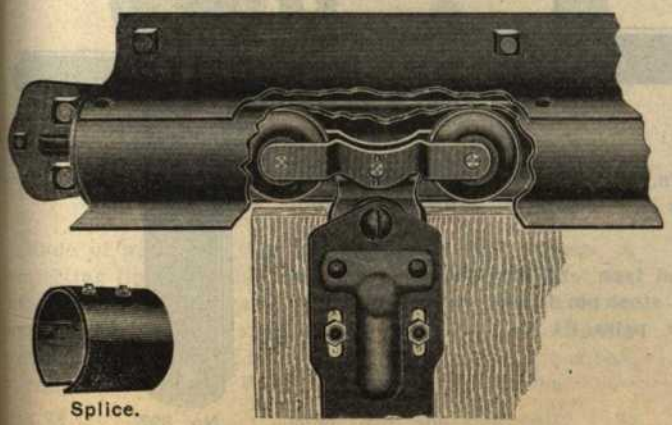
No. 1055—Brackets.....Per doz., 2.40
No. 1056—Brackets.....Per doz., 2.40
No. 1057—Brackets.....Per doz., 2.40
No. 1058—Brackets.....Per doz., 2.40

COVERED CANNON BALL BARN DOOR TRACK

No. 651 Track combines all of the advantages of the No. 681 with an added feature in the cover, which is riveted to the track itself. This cover is not only sufficient in depth to shed the rain, but extends down below the top of the door. It also acts as a support for the track, doing away with center brackets. End brackets are the same as those used on No. 681 Track. Any Cannon Ball hanger can be used in connection with this track. Furnished in 4, 6 and 8-ft. lengths. Packed 100 feet in a crate. Weight per 100 ft., 450 lbs.

No. 651 Track.....Per 100 ft., 45.00





Splice.

SEAL-TITE CANNON BALL TRACK

This track answers the same general purpose as the No. 651. The water shed is formed by simply turning back the outer edge of the track itself far enough to come over the edge of the door to prevent rain or snow blowing in. The upper cover is a separate piece securely riveted to the track. This serves not only to prevent rain or snow from blowing in above and behind the track but also acts as a support for the track. The end brackets are the same as used on No. 681 track. Furnished in 3, 4, 6 and 8-ft. lengths. 3-ft. lengths packed 18 pieces in a crate; other lengths 8 pieces in a crate. The necessary splices for this track are included without charge. Weight per 100 ft., 350 lbs.

No. 933 Track.....Per 100 ft., 39.00

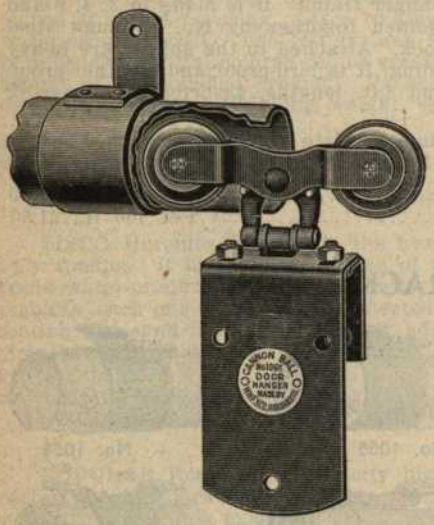
CANNON BALL BARN DOOR HANGERS

Cannon Ball Barn Door Hangers are the result of years of experience and experiments. They are the most practical and durable made. Every shipment is perfect—tested and tried before it leaves the factory.

Special designed steel ball wheels—light running and noiseless—are mounted on a strong steel truss frame. The frame with wheels, runs completely enclosed in a tubular track—nothing exposed.

Cannon Ball Barn Door Hangers are frictionless, flexible, built with long roller bearings, non-adjustable or adjustable as required.

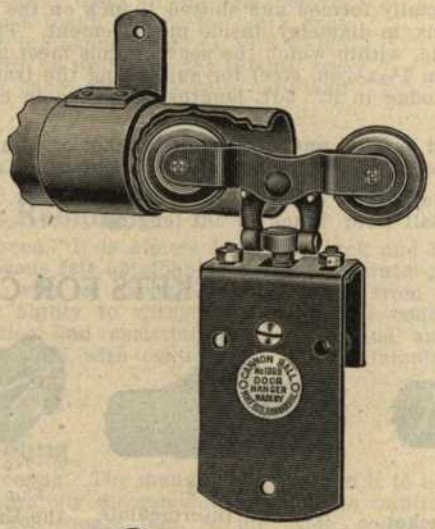
All hangers shown on this page are packed one pair in box, complete with bolts. Six pairs in carton.



No. 1066

Cannon Ball Tandem Barn Door Hanger. For doors weighing up to 400 lbs. Adjustable to thickness of doors 1¾ to 2½ ins. Wgt. per doz. prs., 86 lbs.

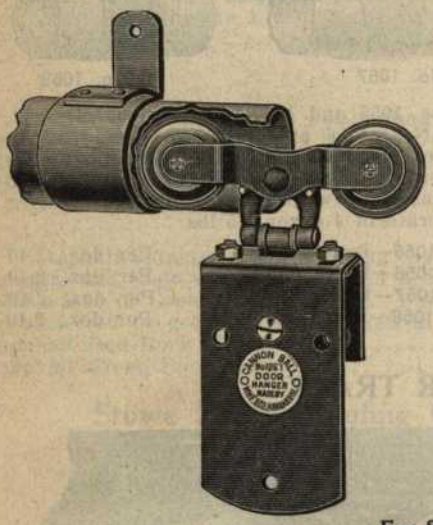
Per doz. prs. 28.50



No. 1068

Cannon Ball Tandem Barn Door Hanger. For doors weighing up to 400 lbs. Lateral and vertical adjustments and adjustments for thickness of doors 1¾ to 2½ ins. Wgt. per doz. prs., 95 lbs.

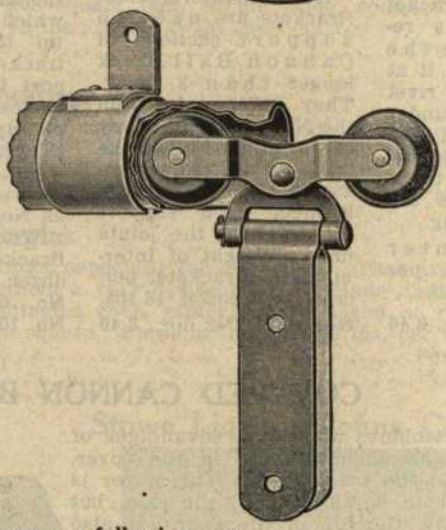
Per doz. prs. 31.50



No. 1067

Cannon Ball Tandem Barn Door Hangers. For doors weighing up to 400 lbs. Lateral adjustment and adjustment for thickness of doors from 1¾ to 2½ ins. Wgt. per doz. prs., 93 lbs.

Per doz. prs. 30.00



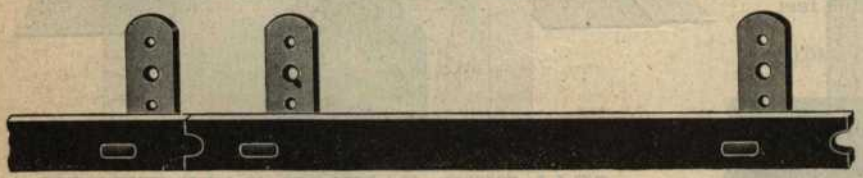
No. 384

Cannon Ball Tandem Barn Door Hangers. This is similar to No. 1066, except not adjustable for thickness of doors. Regularly intended for 2 in. doors. Wgt. per doz. prs., 68 lbs.

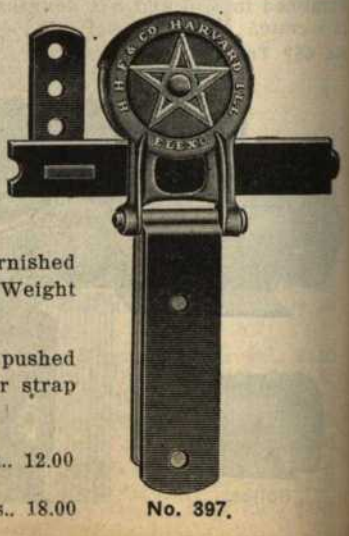
Per doz. prs. 27.00

For Special Garage Door Hangers, see following pages

FLEXO BARN DOOR TRACK AND HANGERS



No. 160 Track.



No. 397.

No. 160 Flexo Track is made of high carbon steel in 3/16-in. thick by 1¼-in. wide. Furnished in 6, 8 and 10-ft. length with brackets attached. Five pieces in a bundle of any size. Weight per 100 ft.. 105 lbs.

No. 397 Flexo Roller Bearing Door Hanger is the Hinged type. Allows door to be pushed outward at bottom. Will not leave the track. Has removable steel pin for attaching door strap to hanger after it has been secured to door. Weight per doz. pairs, 64 lbs.

No. 160—Flexo Track. . . . . . Per 100 ft.. 12.00

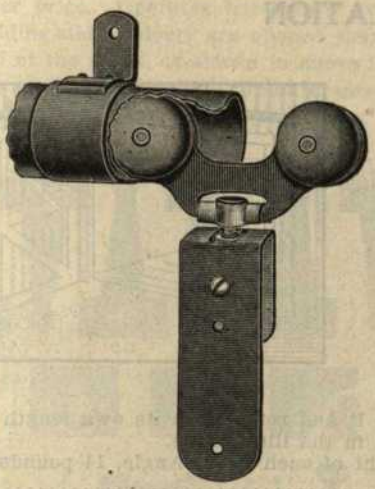
No. 397—Flexo Door Hangers . . . . . Per doz. prs.. 18.00

CANNON BALL JUNIOR BARN DOOR TRACK

Cannon Ball Track described on page 563 provides really greater strength than is necessary for the ordinary door. By forming a track 1½ ins. in diameter and using 16 Ga. steel, the weight generally used in door tracks, we provide in Cannon Ball Junior a tubular track which is in every other respect like Cannon Ball. Strong enough to handle most of the doors in ordinary use and sells at a lower price. Designed for handling doors of regular thickness weighing up to 250 lbs. each. Splice and end brackets made similar to those used with regular Cannon Ball Track. Junior Track is made in 3-ft. lengths only. Crate 96 ft. weighs 110 lbs.

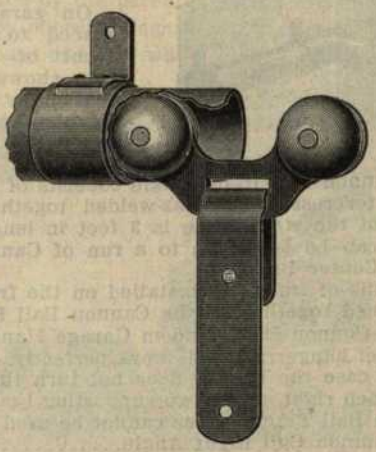
No. 1088—3-ft. lengths. . . . . Per ft., .18
No. 1063—Splice Bracket. . . . . Per doz., 1.35
No. 1065—End Bracket. . . . . Per doz., 1.20

CANNON BALL JUNIOR DOOR HANGERS



Lateral and Vertical Adjustments. Machine cast gray iron ball wheels diameter 1⅜ ins. 10 cold rolled steel bearings made from ¼ in. stock, running on cold rolled steel axle. Finished in black japan. Packed one pair in box, 6 pair in carton. Weight per doz. prs., 55 lbs.

No. 1082. . . . . Per doz. prs., 21.00



Machine cast gray iron ball wheels 1⅜ ins. in diameter. 10 cold rolled steel bearings, made from ¼ in. stock running on cold rolled steel axles. Finished in black japan. Packed one pair in box, 6 pr. in a carton. Weight per doz. pr., 48 lbs.

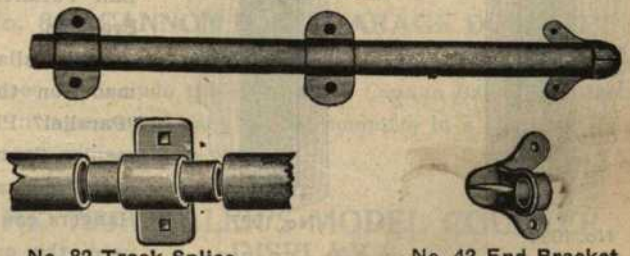
No. 1061. . . . . Per doz. prs., 15.00

TWENTIETH CENTURY BARN DOOR HANGERS

Made of malleable iron in one piece. Very strong. A projecting lip below the track makes it impossible for the hanger to jump the track. The wheels have wide grooves and run on hardened steel rollers. Finished in battleship gray enamel. Trimmed in red. Packed one pair in a box, 6 pairs in a carton. Weight per doz. pairs, 74 lbs.

No. 28. . . . . Per dozen pairs, 27.00

TWENTIETH CENTURY BARN DOOR TRACK



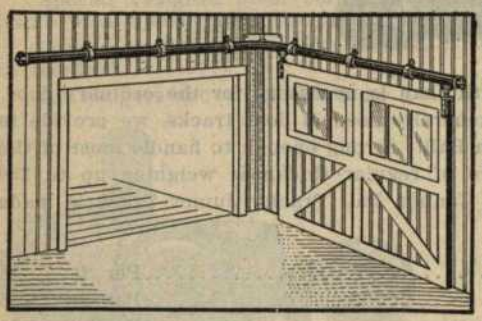
No. 82 Track Splice. No. 42 End Bracket.

This track is made of 1⅛-inch round tubing which is closed at the joint to prevent water from getting into the track to rust it. Made only in 2-ft. sections. Guaranteed to be as strong at the splice as at any other point. Each splice is a supporting bracket so that it makes a very substantial track that will hold the heaviest doors. Packed 100 ft. in a crate complete with the necessary splices and brackets. Weight per 100 ft., 120 lbs.

No. 30. . . . . Per 100 ft., 21.00

Cannon Ball Garage Door Track and Hangers

"CURVE" INSTALLATION



There is a big demand for garage door equipment which permits the door to be carried to the inside of the garage against the side wall, where it occupies only the space required by its own thickness.

In such a case, both doors can be carried to one side, or track and curve can be installed so that the doors can be carried back on each side.

No. 712 Track Curve.

The Cannon Ball Track Curve is just a curved length of standard Cannon Ball Track. It fits into brackets like the straight lengths. A special support, riveted to the top of the curve and fastened to the brace as shown, keeps the curve from twisting or sagging.

The center radius of the curve is 12 inches. The distance from the middle of the track bracket, joining the curve and the straight track to the corner, is 14½ inches. The door should be built at least 15 inches from the corner so that both door hangers rest in the straight track when the door is closed. No. 1027 Hanger should be used with these outfits.

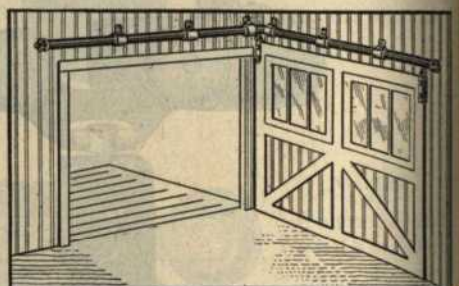
Weight of each curve, 4 pounds.

No. 712—Cannon Ball Track Curve . . . . . Each, 2.40

We can also furnish "Curve Installation" outfits with Flexo Style Track and Hangers. Prices on request.

"RIGHT ANGLE" INSTALLATION

On garages where the opening is placed to the extreme side of the front of the garage, this illustration shows how the door can be installed by the use of a Cannon Ball Right Angle in connection with standard Cannon Ball Track and Brackets.



The Cannon Ball Right Angle consists of two 3-foot lengths of track, cut out, intercrossed and gas-welded together, forming a right angle. Each arm of the right angle is 3 feet in length; is notched on the end so that it can be joined on to a run of Cannon Ball Track, by the use of regular Center Brackets.

Two runs of track are installed on the front and side of the garage and are joined together by the Cannon Ball Right Angle. With this arrangement, Cannon Ball Tandem Garage Hangers No. 1086 can be used. It is a swivel hanger and will work perfectly.

In this case the hanger does not turn the corner, but only runs up to it and remains in its own length of track.

With each right angle, two supporting brackets are furnished, as shown in the illustration.

Cannon Ball Track curves cannot be used in this type of Garage. Weight of each Right Angle, 14 pounds.

No. 716—Cannon Ball Right Angle . . . . . Each, 4.50

CANNON BALL GARAGE DOOR HANGERS

No. 1086 No. 1027

No. 1027 is for use with Cannon Ball Curve Installations. Made to turn corner, in a closed or tubular track. Adjustable swivel. The truck swivels freely and will not stick or bind. Weight per dozen pairs, 67 lbs.

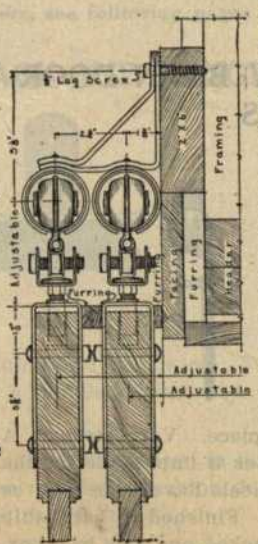
No. 1027 . . . . . Per doz. prs., 24.00

No. 1086 is for use with Cannon Ball Right Angle Installations. Tandem adjustable hanger, also vertical adjustment, roller bearings. Weight per dozen pairs, 89 lbs.

No. 1086 . . . . . Per doz. prs., 31.50

"PARALLEL" TRACK INSTALLATION

This illustrates a cross-sectional view of a "Parallel" installation. It shows two runs of track, supported by Cannon Ball Parallel Brackets.



On installations made on the "Parallel" Plan, regular Cannon Ball Track and Hangers can be used, the only special material required being the Parallel Center, Intermediate and End Brackets instead of the standard type.

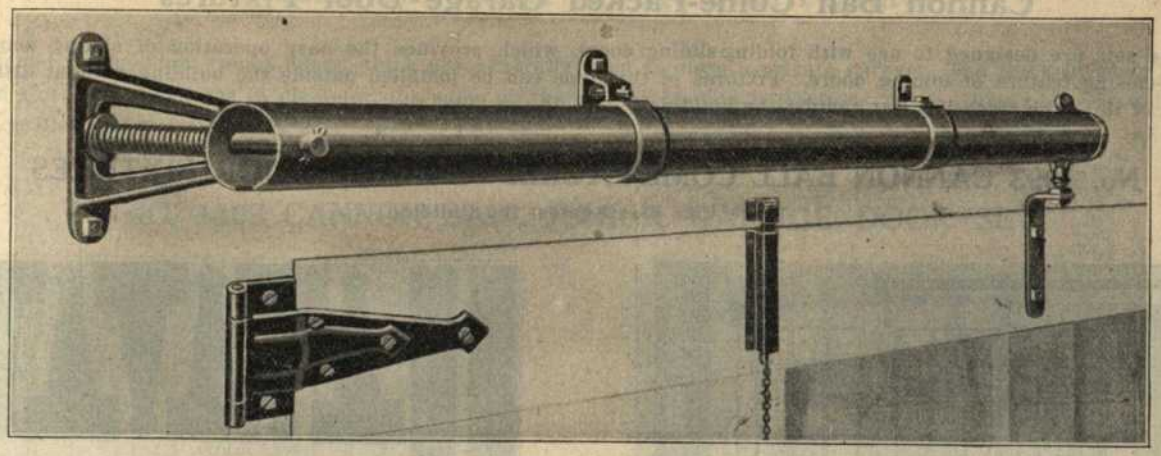
The Center Brackets for Parallel Cannon Ball Track are fitted with two sleeves of twelve gauge material, riveted to a triangular steel brace of ⅜x1½-inch material. These rivets project ⅜ of an inch on the inside of the track. The ends of each section of track are slotted and the slot slips over the head of the rivet, keeping the track in perfect alignment with the joints. The Intermediate Brackets are similar except the rivets are countersunk so the brackets will slip on the track to support it in the center. Weight of Parallel Brackets and End Stops, per dozen, 30 pounds.

No. 696—Center Brackets . . . . . Per dozen, 8.50

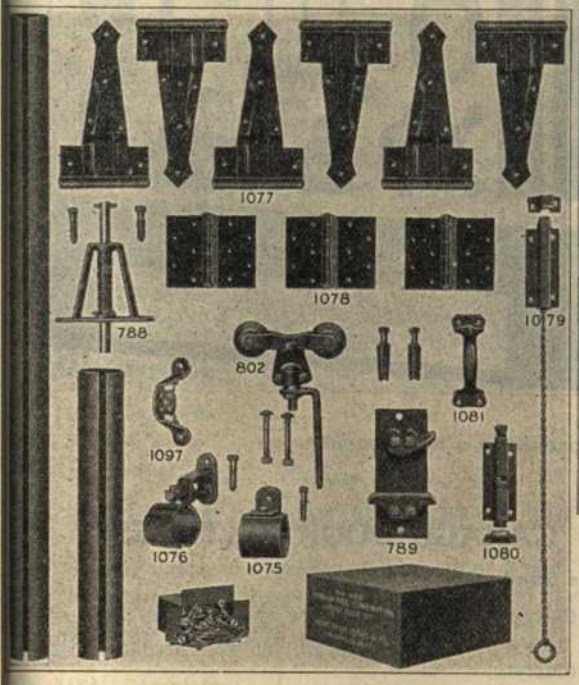
No. 803—Intermediate Brackets . . . . . Per dozen, 8.50

No. 698—End Stops . . . . . Per dozen, 8.50

No. 800 Cannon Ball Garage Door Set



The No. 800 Cannon Ball Combination (Folding-Sliding) Garage Door Set is especially designed for all types of garages. Will fit a door opening of any size up to 8½ feet. For wider doors we can furnish longer lengths of track at a slightly higher price. Operates frictionless and noiseless. An adjustment on the hanger prevents the doors from sagging. When the folding-sliding doors are opened they are automatically held in place by the patented spring bracket which supports the end of the track, as shown in above illustration. This spring device operates regardless of the thickness of the doors. Doors operate in a small circumference and take up a minimum amount of space when folded.



Above illustration shows one No. 800 complete Garage Door Set, ready to install. Contains the following items:

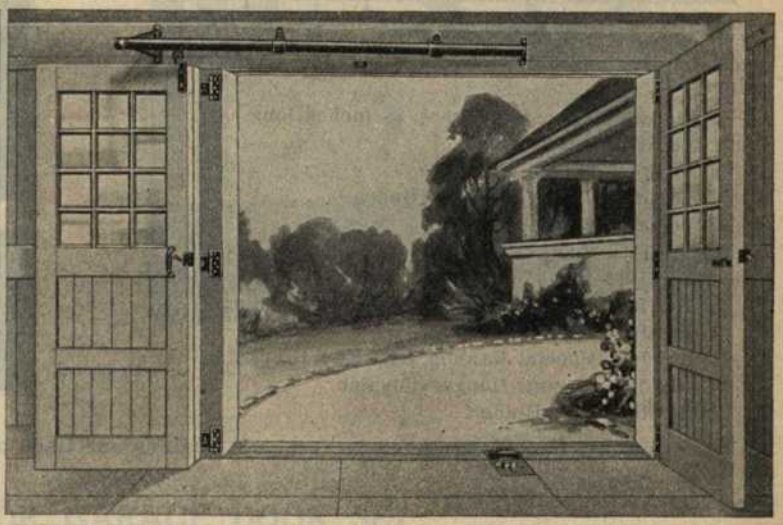
One 6½-foot length of Cannon Ball Track.
One Cannon Ball Swivel Bracket.
One Floor Guide.
One Hand Pull.
One specially designed Tandem Cannon Ball Hanger.
Nine Hinges.
One Set Chain and Foot Bolts.
One Intermediate Bracket.
One Spring Supporting Bracket for Cannon Ball Track.
One Cannon Ball Door Latch, also the necessary screws, lags and bolts are included.

Weight of Set complete, 24 lbs.

All fittings except track packed complete in a box.

No. 800—Garage Door Set.....Each, 11.40

If wanted for door wider than 8½ feet, specify the width of door and we can furnish longer piece of track at only a slightly higher price.



Above illustration shows the No. 800 Garage Door Set as it appears from an inside view of a garage. If it is undesirable to operate the whole front, a convenient entrance may be obtained by means of a single swinging door, as shown.

No. 805 CANNON BALL GARAGE DOOR SET

No. 805 Garage Door Set is the same as No. 800, except it does not include the Hinges and Cannon Ball Door Latch.

All fittings except track packed complete in a box.

No. 805—Garage Door Set.....Each, 9.00

No. 790 DEALER'S MODEL COUNTER DISPLAY

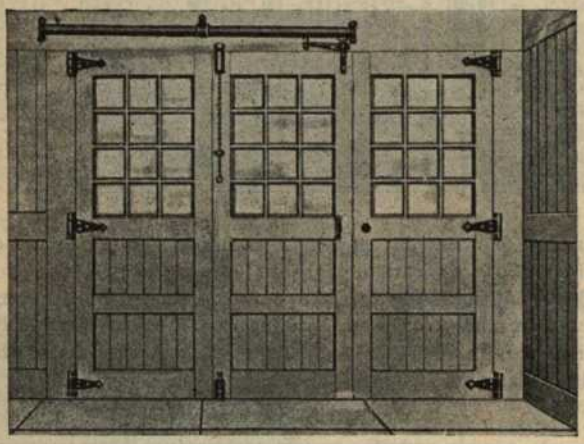
This counter display is an attractively finished model, approximately 20 inches high and 34 inches wide. It is used for illustrating the No. 800 Cannon Ball Garage Door Set, and consists of frame with three doors and the necessary track and fixtures to make it an exact duplicate of an installation of a complete outfit. It will arouse the customer's interest and help make sales quickly. Every dealer should have one. Full information on request.

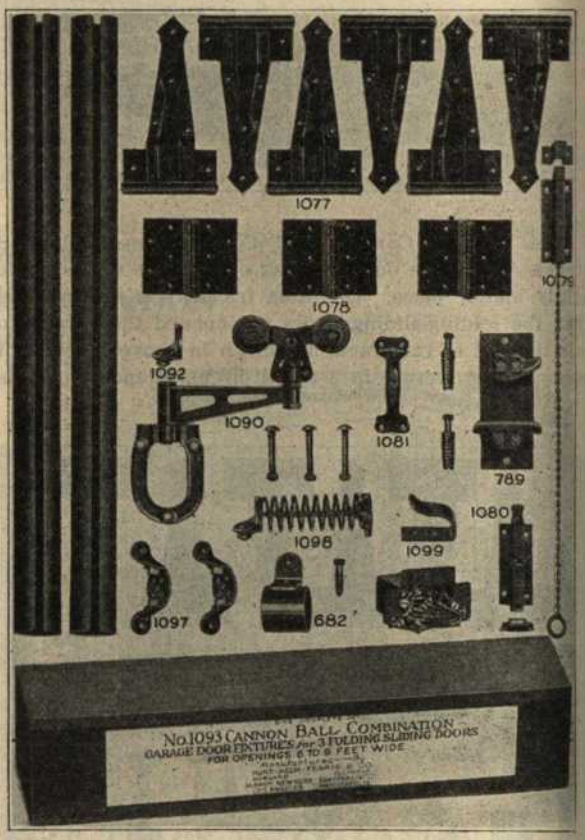
Cannon Ball Come-Packed Garage Door Fixtures

These sets are designed to use with folding-sliding doors, which provides the easy operation of sliding doors with the tight-closing feature of folding doors. Fixtures of this type can be installed outside the building without disfiguring the front of it, as the track lies flat against the building.

No. 1093 CANNON BALL COME-PACKED GARAGE DOOR FIXTURES

Track Lies Flat Against the Building.





This set is designed for three doors, 2 ft. 6 in. to 3 ft. wide, in openings 7 ft. 6 in. to 9 ft. wide. The set contains:

- 2 Pieces Cannon Ball Track 38 inches long.
- 1 No. 682 Splice Bracket.
- 6 No. 1077 Offset T Hinges.
- 3 No. 1078 Offset Surface Hinges.
- 1 No. 1079 Chain Bolt.
- 1 No. 1080 Foot Bolt.
- 2 No. 1081 Hand Pulls.
- 1 No. 1090 Cannon Ball Extension Arm Hanger.
- 1 No. 1092 Hanger Stop.
- 2 No. 1097 Special Cannon Ball End Brackets.
- 1 No. 1098 Spring Hanger Cushion.
- 1 No. 1099 Top Holder.

Complete bolts and screws for the set. All fixtures and track packed in a box complete.

No. 1093—Complete . . . . . Per Set, 10.65

No. 1094 CANNON BALL COME-PACKED GARAGE DOOR FIXTURES

Track Lies Flat Against the Building.

For four doors each 2 ft. 6 in. to 3 ft. wide. In openings 10 ft. to 12 ft. The fixtures are same as No. 1093, except has in addition one No. 789 Floor Guide; the balance of items double the amount in No. 1093 except No. 1077 Offset T Hinges, which is the same. All fixtures and track packed in a box complete.

No. 1094—Complete . . . . . Per Set, 18.75

No. 1095 CANNON BALL COME-PACKED GARAGE DOOR FIXTURES

Track Lies Flat Against the Building.

For five doors each 2 ft. 6 in. to 3 ft. wide. In opening 12 ft. 6 in. to 15 ft. wide. The fixtures are same as No. 1094, except has in addition one No. 789 Floor Guide, nine No. 1078 Offset Surface Hinges. The balance of items the same amount as in No. 1094. All fixtures and track packed in a box complete.

No. 1095—Complete . . . . . Per Set, 19.35

No. 1096 CANNON BALL COME-PACKED GARAGE DOOR FIXTURES

Track Lies Flat Against the Building.

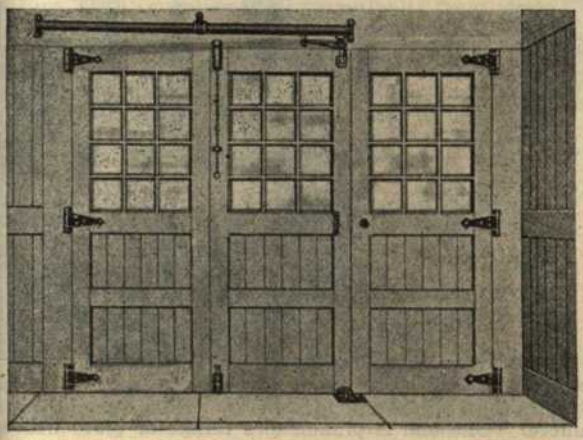
For six doors each 2 ft. 6 in. to 3 ft. wide. In openings 15 ft. to 18 ft. wide. The fixtures are same as No. 1095, except has twelve No. 1078 Offset Surface Hinges, three No. 1079 Chain Bolts and three No. 1080 Foot Bolts, and has no Floor Guide. The balance of items the same amount as in No. 1095 Set. All fixtures and track packed in a box complete.

No. 1096—Complete . . . . . Per Set, 22.20

Cannon Ball Junior Garage Door Fixtures

Designed for medium weight doors which are generally used to close a private garage. The track is made of heavy 16 gauge steel and 1½ inches in diameter, the same as the regular Cannon Ball Junior Track. Roller-bearing ball wheels conform to the shape of the track.

NO. 1103 CANNON BALL JUNIOR GARAGE DOOR SET



Complete fixtures for 3 Rolling-Folding Doors 2 ft. 6 ins. to 3 ft. wide for opening 7 ft. 6 in. to 9 ft. wide.

Set contains:

2 38 in. pieces of Track.
1 No. 1063 Splice Bracket.
1 No. 1100 Extension Arm Hanger.
2 No. 1105 Cannon Ball Junior End Brackets.
1 No. 1101 Cannon Ball Junior Spring Cushion.
1 No. 1102 Rear Bumper.
6 No. 1107 6-in. Offset T Hinges.
3 No. 1108 Offset Surface Hinges.
1 No. 1079 Chain Bolt.
1 No. 1080 Foot Bolt.
1 No. 1081 Door Pull.
1 No. 1106 Cannon Ball Junior Top Guide.

Necessary screws, bolts and lags. All fixtures including track, packed in box complete.

No. 1103—Complete. . . . . Per Set, 8.70

NO. 1104 CANNON BALL JUNIOR GARAGE DOOR SET

For four doors (2 openings to each side) 2 ft. 6 in. to 3 ft. wide, opening 10 ft. to 12 ft. wide. The fixtures and track same as No. 1103 except has 2 No. 1100 Cannon Ball Junior Extension Arm Hangers, the balance double the amount contained in No. 1103 Set. All fixtures, including track, packed in box complete.

No. 1104—Complete . . . . . Per set, 12.75

CANNON BALL CANE BOLT

A half inch round rod, 24 ins. long, which locks and holds the door securely at the top and bottom. It locks simply by shoving it up into the socket and giving it a turn to the right or left. Automatically locks of its own weight when the door is pushed into proper position. Finished in black japan. Weight each, 3 lbs.

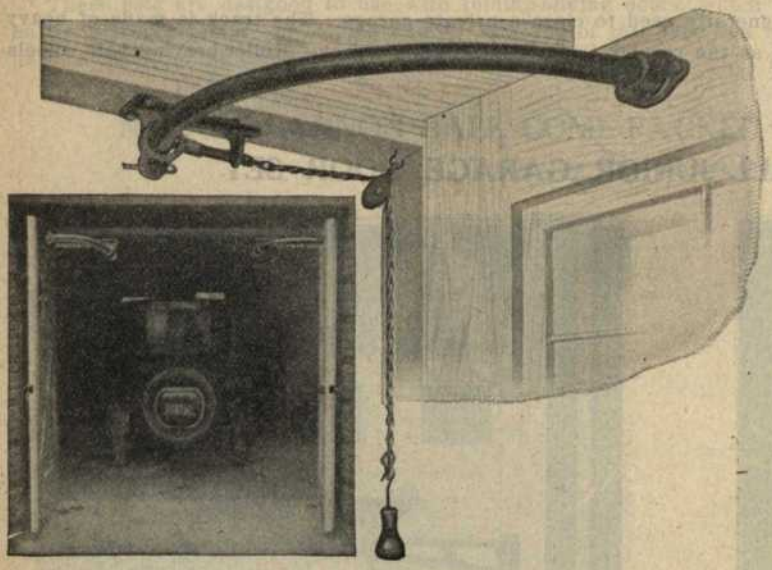
No. 1123. . . . . Each. 1.05

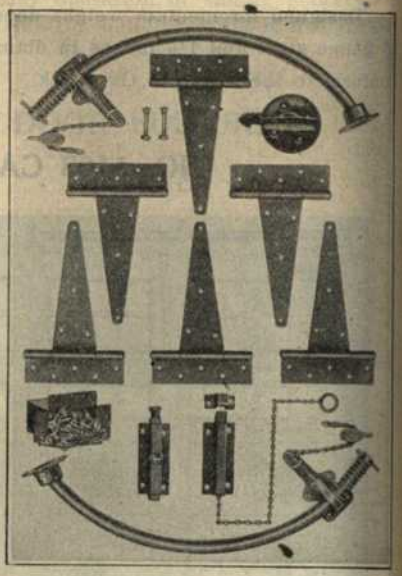
CANNON BALL CREMONE BOLT

Locks bottom and top of the door simultaneously with the same operation and holds them securely. Instantly adjustable. Constructed of ½-inch solid steel rod. Lever handle of ¼x1-inch steel, center disc and swivel bracket of high grade malleable iron. Finished in black japan. Regularly furnished in lengths adjustable to doors from 7 ft. 6 in. to 10 ft. high. Weight each, 15 lbs.

No. 1125. . . . . Each, 5.25

STAR SWINGING DOOR HOLDER SET





This holder consists of a piece of curved tubing 1 inch in diameter. One end is pinned to a flange or plate which is bolted to the door. The curved tubing slides through a ring in a malleable bracket that is bolted to the under side of the door frame. When the door is pulled wide open this curved arm is automatically locked in place by a spring bolt which slips into a hole in the tube and holds the door open. The spring bolt is released by a pull on the chain operated over a pulley. With a pair of these door holders we include a Cannon Ball Door Latch, a Chain Bolt and Foot Bolt and three pairs of heavy 10-inch Tee Hinges with reversed pad. This makes a complete outfit for hanging a pair of garage doors. Each set comes complete, packed in a box. Weight No. 1019 complete. 34 lbs.; No. 1015 per pair, 9 lbs.

No. 1019—Star Swinging Door Holder and Hinge Set.....Each, 7.50
No. 1015—Star Swinging Door Holder only.....Per pair, 2.50

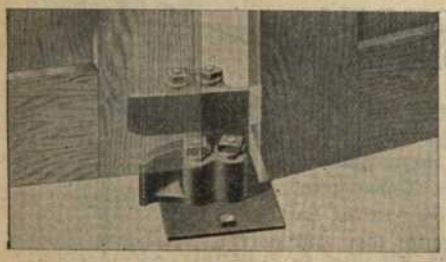
GABLE DOOR SET

No. 824 Gable Door Set consists of fixtures necessary to do away with the old style method of lowering and raising the gable doors by ropes, pulleys and hay carriers. The fixtures contained in this set are two 8-ft. pieces of Cannon Ball Track, two pairs No. 1066 Cannon Ball Hangers, four Cannon Ball End Brackets and four Cannon Ball Intermediate Brackets. The track is hung parallel with the roof on both sides of the peak. Half of the door is hung on each side. By attaching a rope to the door, passing it through a pulley in the peak, then attaching a weight to the end to balance the door it can easily be opened or closed. Weight per set, 60 lbs.

No. 824—Gable Door Set.....Each, 11.30

For Special Hay Door Hinges, see page 352.

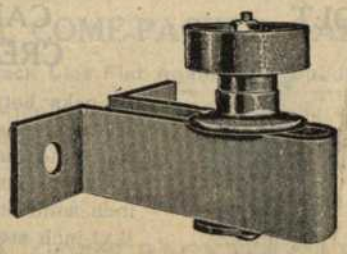
FLOOR GUIDE



This illustrates the guide which is regularly used in connection with the No. 800 Folding-Sliding Garage Door Sets. It holds the doors firmly in place. Weight per dozen, 20 lbs. Packed ½ dozen in a box.

No. 789.....Each, .75

STAY ROLLERS



No. 176 is made of heavy steel with iron adjusting parts. Cannot turn sideways or get away from door. Japanned finish. Weight per dozen, 12 lbs. Packed ½ dozen in a box.

No. 176.....Per dozen, 2.85

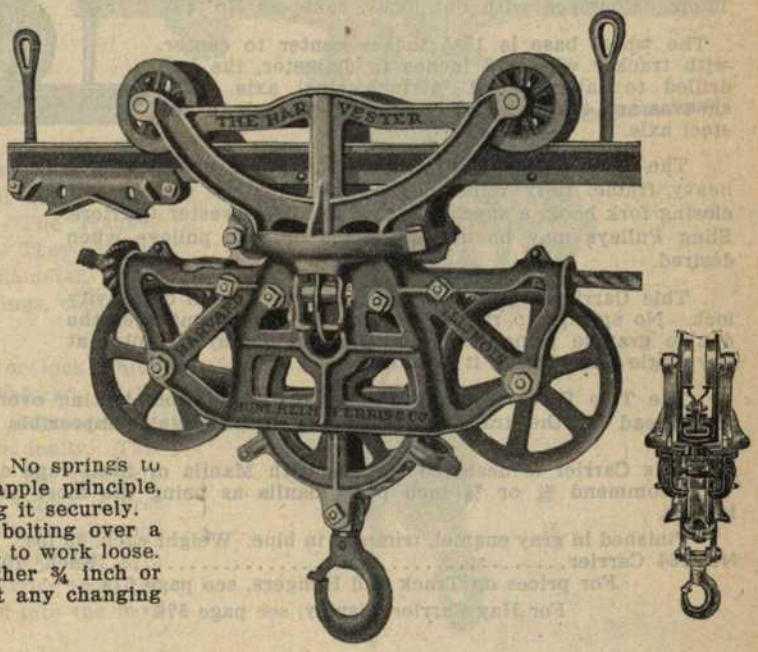
No. 563 is made of steel. Adjustable to different thicknesses of doors. Reversible and can be used either screwed to side of barn or turned over and prongs set in cement floor. Japanned finish. Weight per dozen, 11 lbs. Packed ½ dozen in a box.

No. 563.....Per dozen, 2.85

Harvester Hay Carriers

Harvester Hay Tools are reliable. They are built to fit the needs of any farmer. Extra strong and after the idle months, come back to work as smooth running as the first day installed.

No. 493 FORK CARRIER FOR STEEL TRACK



No. 493 is a reversible Fork Carrier for Star Double Flange Steel Hay Carrier Track.

The frame is made of best grade malleable iron, fully reinforced. The Nut Lock is a special Harvester Feature, used to prevent the frame bolts from working loose. This is an exclusive feature of all Harvester Carriers and insures absolute rigidity. The wheel base is 15½ inches. The tracker wheels are 3 inches in diameter at the tread and revolve on ⅝ inch steel axles. The axle is lathe-turned. The sheaves, 7 inches in diameter, are of best gray iron and can be furnished drilled to take steel axle or roller bearing.

The Fork Pulley, of improved design, is fitted with 7 inch sheave and self closing fork hook. Sling Pulleys may be used in place of Fork Pulleys, thus allowing the use of Slings when desired.

The Self-Closing Fork Hook is a special feature with all Harvester Carriers. By the use of this hook, the fork may be quickly detached.

The Carrier has an improved type of gravity lock. No springs to rust out or break. This lock embraces the double grapple principle, permitting the pulley to enter at any angle and holding it securely.

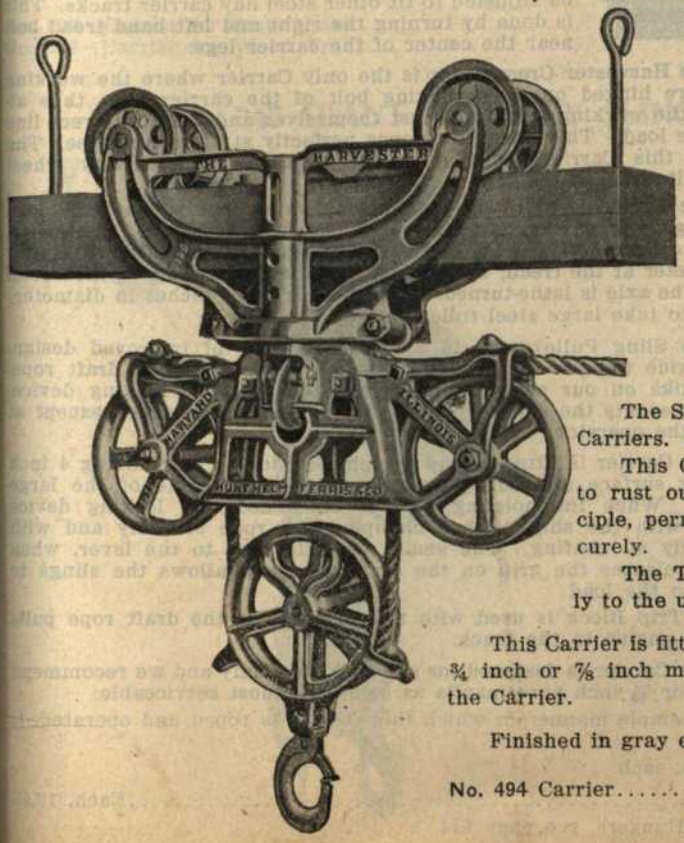
The Trip Block is made of best malleable iron, bolting over a rivet head on the track, thus making it impossible for it to work loose. This Carrier is fitted with sheaves designed to use either ¾ inch or ⅞ inch manila rope or ⅜ inch wire cable, and without any changing of the Carrier.

Finished in gray enamel. Weight each, 50 lbs.

No. 493 —Plain Bearing Carrier.....Each, 13.05
No. 493R—Roller Bearing Carrier.....Each, 14.10

For price on Track and Hangers, see page 574.
For Hay Carrier Display, see page 576.

No. 494 FORK CARRIER FOR WOOD TRACK



No. 494 is a reversible Fork Carrier, the wheels and trucks being especially designed for wood track.

The frame is made of best malleable iron, fully reinforced. Has special Harvester Nut Lock same as No. 493. The wheel base is 15¾ inches, center to center. The tracker wheels are 3 inches in diameter at the tread and revolve on ⅝ inch steel axles. The axle is lathe-turned.

The sheaves, 7 inches in diameter, best gray iron, are drilled to take steel axle.

The Fork Pulley, of improved design, is fitted with 7 inch plain bearing sheave and self-closing fork hook. Sling Pulleys may be used in place of Fork Pulley when desired.

The Self-Closing Fork Hook is a special feature with all Harvester Carriers. By the use of this hook, the fork may be quickly detached.

This Carrier has an improved type of Gravity Lock. No springs to rust out or break. This lock embraces the double grapple principle, permitting the pulley to enter at any angle and holding it securely.

The Trip Block is made of best malleable iron, and bolts securely to the under side of the wood track.

This Carrier is fitted with sheaves so designed that it may be used with either ¾ inch or ⅞ inch manila rope, or ⅜ inch wire cable without any changing of the Carrier.

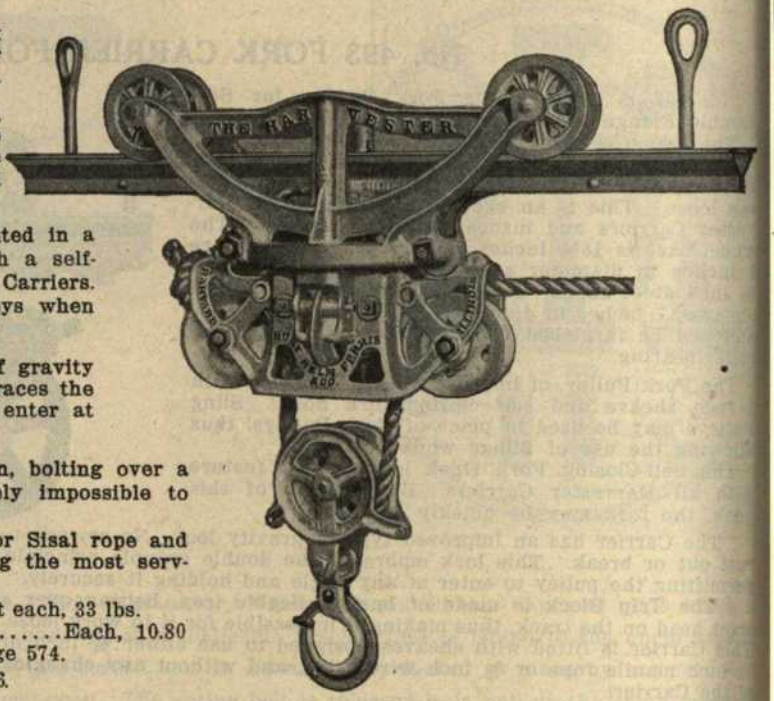
Finished in gray enamel, trimmed in blue. Weight each, 54 lbs.

No. 494 Carrier.....Each, 13.05

For price on Track Hangers, see page 574.

Harvester Hay Carriers—Continued

No. 564 FORK CARRIER FOR STEEL TRACK



The Harvester, Fig. 564, is a reversible Fork Carrier for Star Double Flange Steel Hay Carrier Track. Equipped with nut locks, same as No. 493.

The wheel base is 15½ inches center to center, with tracker wheels 3 inches in diameter, the hub drilled to take special ⅝ inch steel axle. The sheaves are 4 inches and revolve on ⅝ inch turned steel axle.

The Fork Pulley is of the latest design, mounted in a heavy frame, fully reinforced. It is supplied with a self-closing fork hook, a special feature in all Harvester Carriers. Sling Pulleys may be used in place of fork pulleys when desired.

This Carrier is fitted with an improved type of gravity lock. No springs to rust or break. This lock embraces the double grapple principle, permitting the pulley to enter at any angle and holding it securely.

The Trip Block is made of best malleable iron, bolting over a rivet head on the track, thus making it absolutely impossible to loosen.

This Carrier is designed for use with Manila or Sisal rope and we recommend ¾ or ⅞ inch pure manila as being the most serviceable.

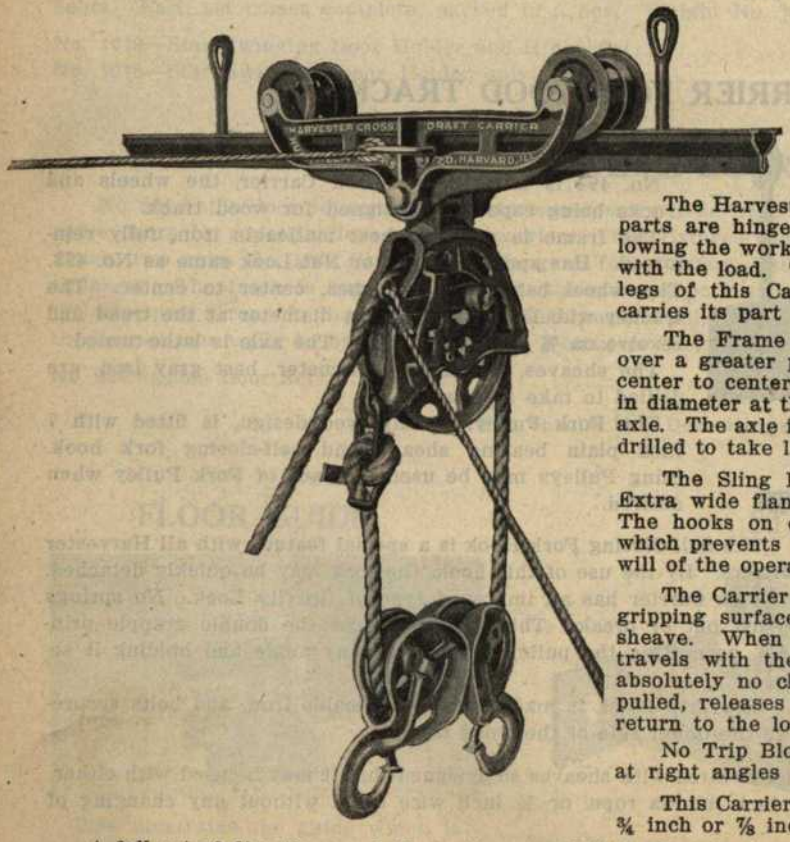
Finished in gray enamel, trimmed in blue. Weight each, 33 lbs.

No. 564 Carrier.....Each, 10.80

For prices on Track and Hangers, see page 574.

For Hay Carrier Display, see page 576.

No. 575 CROSS DRAFT SLING CARRIER FOR STEEL TRACK



No. 575 is called "Cross Draft" from the fact that the draft rope runs from the carrier across the barn direct to the team, at a saving of considerable rope as compared with the old method. This carrier is designed for Star Double Flange Steel Track, but can be adjusted to fit other steel hay carrier tracks. This is done by turning the right and left hand tread bolt near the center of the carrier legs.

The Harvester Cross Draft is the only Carrier where the working parts are hinged on the adjusting bolt of the carrier legs, thus allowing the working parts to adjust themselves and draw in direct line with the load. This keeps the ropes perfectly straight and free. The legs of this Carrier oscillate on the adjusting bolt. Every wheel carries its part of the load.

The Frame is extra heavy and long so as to distribute the load over a greater portion of the track. The wheel base is 16¾ inches, center to center of tracker wheels. The tracker wheels are 3 inches in diameter at the tread, wide flange, hub drilled to take ⅝ inch steel axle. The axle is lathe-turned. The sheaves are 8 inches in diameter, drilled to take large steel roller bearing.

The Sling Pulleys are in malleable frames of improved design. Extra wide flanges with rolled edges prevent chafing of draft rope. The hooks on our sling pulleys are fitted with self-locking device, which prevents the slings or forks from becoming detached except at will of the operator.

The Carrier is fitted with a gripping device or lock having 4 inch gripping surface and curved to conform to the circle of the large sheave. When the hoisting rope is slackened, the locking device travels with the sheave, thus clamping the rope securely and with absolutely no chafing. The small rope attached to the lever, when pulled, releases the grip on the draft rope and allows the slings to return to the load.

No Trip Block is used with this Carrier, as the draft rope pulls at right angles to the track.

This Carrier is designed for use with rope only and we recommend ¾ inch or ⅞ inch pure manila as being the most serviceable.

A full set of directions and illustrations, explaining the simple manner in which this carrier is roped and operated, is sent with each carrier or mailed upon application.

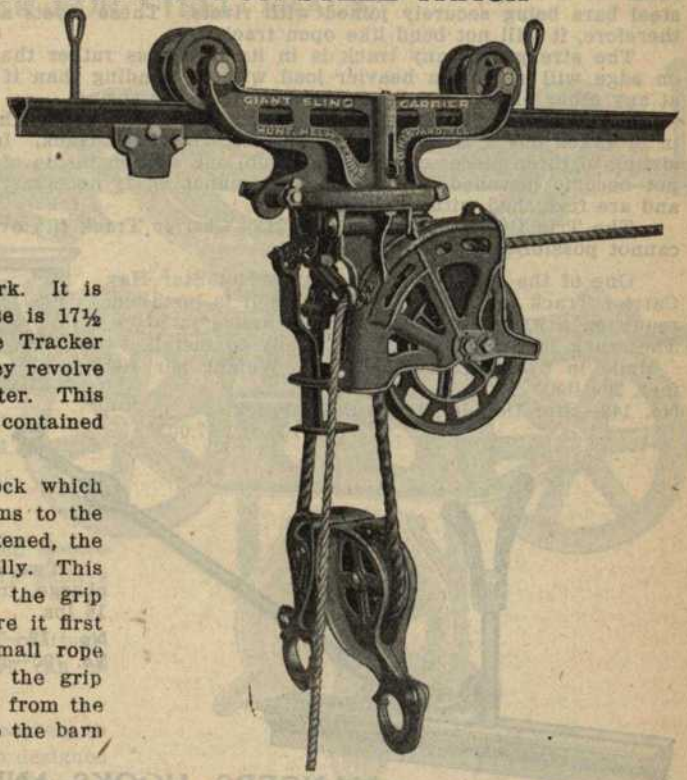
Finished in gray enamel, trimmed in red. Weight, 43 lbs. each.

No. 575 Carrier.....Each, 19.95

For prices on Trank Hangers, see page 574.

Harvester Hay Carriers—Continued

No. 1045 GIANT ONE-WAY SLING CARRIER FOR STEEL TRACK



The Harvester Giant Sling Carrier is of simple design and of few parts. It is a reversible carrier and will take in hay from either end or both ways from the center of the barn.

The load hangs directly beneath the center, and the loaded carrier is evenly balanced. This distributes the load evenly to all four tracker wheels. It gives an even bearing on both sides of the track so that the carrier operates easily and smoothly.

It is extra heavy and strong, designed for heavy work. It is built for Star Double Flange Steel Track. The wheel base is 17½ inches from center to center of the tracker wheels. The Tracker wheels have wide flange and are 3 inches in diameter. They revolve on ⅝ inch steel axles. The sheave is 9½ inches in diameter. This carrier is also fitted with special extra long roller bearings, contained in a housing.

This Carrier is provided with a gripping device or lock which has a long gripping surface. This gripping surface conforms to the circle of the large wheel. When the hoisting rope is slackened, the gripping surface travels with the wheel and sets gradually. This does not mean that the rope slips through the grip, but the grip travels with the rope and clamps firmly at the point where it first takes hold, without chafing or wearing the rope. The small rope attached to the lever, as shown in the illustration, locks the grip on the draft rope and at the same time releases the carrier from the trip block. By using this lever the load may be carried into the barn at any desired elevation.

The Sling Pulleys provided with this carrier are Harvester Long Neck Pulleys. These pulleys are made with a malleable frame of improved design, provided with automatic self-closing hook. The sling or fork snaps into this hook and can easily be detached, but it cannot possibly be detached by accident. A wide throat with rounded edges prevents wear on the rope. Furnished also for wood track, as No. 688.

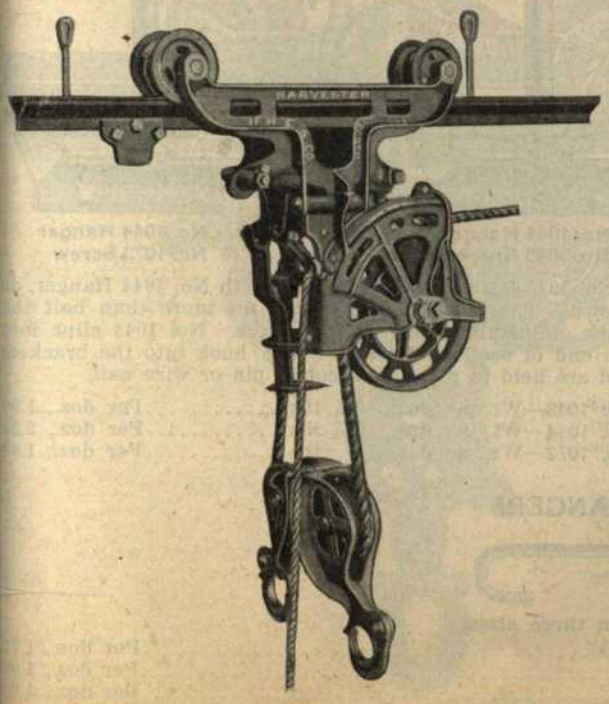
The Carrier is fitted with Sheaves designed to use ¾, ⅞ or 1-inch Manila Rope. ⅞-inch Pure Manila Rope is recommended for best results.

Finished in gray enamel, trimmed in red. Weight each, 61 lbs.

No. 687—Carrier for Steel Track.....Each, 24.00
No. 688—Carrier for Wood Track.....Each, 24.00

For price on Track and Hangers, see page 574.

No. 1045 GIANT ONE-WAY SLING CARRIER FOR STEEL TRACK



The No. 1045 is a one-way Sling Hay Carrier for Steel Double Flange Track. Similar to No. 687 except is not reversible.

Frame is made of best grade malleable iron fully reinforced. Extra heavy and large so as to distribute the load over a greater portion of the track. Has special Harvester Lock Nuts, as described in No. 493 Carrier. rier. The Wheel Base is 17½ inches. The Tracker Wheels are 3 inches in diameter. The Sheave. 9½ inches in diameter, is of best gray iron and drilled to operate on large steel roller bearing axle. The Sling Pulleys provided with this Carrier are Harvester Long Neck Pulleys made with malleable frame of improved design provided with automatic self-closing hook. It is also provided with the rope gripping device, which has a long gripping surface. When the hoisting rope is slackened. the gripping surface travels with the wheel and sets gradually. This does not mean that the rope slips through the grip, but the grip travels with the rope and clamps firmly at the point where it first takes hold without chafing the rope.

The Carrier is fitted with Sheaves designed to use ¾, ⅞ or 1-inch Manila Rope. ⅞-inch pure Manila Rope is recommended for best results.

Finished in gray enamel trimmed in red. Weight each, 57 lbs.

No. 1045.....Each, 18.75

For price on Track and Hangers, see page 574.

No. 142 STAR DOUBLE FLANGE STEEL HAY CARRIER TRACK

Star Steel Hay Carrier Track is made of high carbon steel of the same grade used in the manufacture of railroad rails. It is simple in construction and is strong and durable. It is really two tracks in one—the two special rolled steel bars being securely joined with rivets. These rivets are only eight inches apart, which makes the track rigid, therefore, it will not bend like open track.

The strength of any track is in its thickness rather than its width. It is a well-known fact that any material set on edge will support a heavier load without bending than if laid flat. It is guaranteed to be as strong at the splice as at any other place. It will not buckle, bend nor spring.

The Star Track Hangers slide lengthwise of the track, thus adjusting to any rafter bracket. Hangers may be put in or taken out if necessary without disturbing the track. In the cut we show plainly the construction of a splice consisting of three pieces of malleable iron, one section insfde of track and two sections outside, and so locked that it cannot become loosened. No drilling nor punching is necessary to fit splice blocks, as they are shipped complete with bolts and are furnished without charge.

The Trip Block used with Star Hay Carrier Track fits over the head of a rivet on the track wherever desired. It cannot possibly jar loose nor slide.

One of the most desirable features of Star Hay Carrier Track is the ease with which it is installed, requiring a wrench only to bolt the splice in place. The track is shipped complete, ready to install.

Made in 6 and 12-foot lengths. Weight per 100 feet, 200 lbs.

No. 142—Star Double Flange Steel Track.
.....Per 100 ft., 27.00

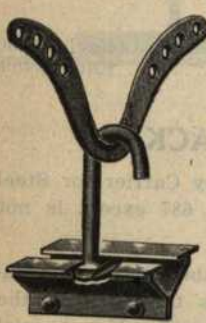
TRACK ROD AND END STOPS

The Track Rod in the illustration is used in connection with the stop block at the end of track to prevent track from working endwise.

Two Stop Blocks are regularly included with each Carrier without charge, track rods being extra. No. 72 Track Rod, weight per doz., 16 lbs.

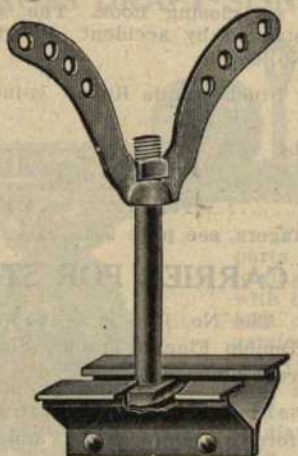
No. 72—Track Rod.....Per doz., 4.50
No. 790—Extra Stop Blocks only for Double Flange Track. Per doz., 2.40

HANGERS, HOOKS AND RAFTER BRACKETS



No. 782 Hanger
No. 126 Bracket

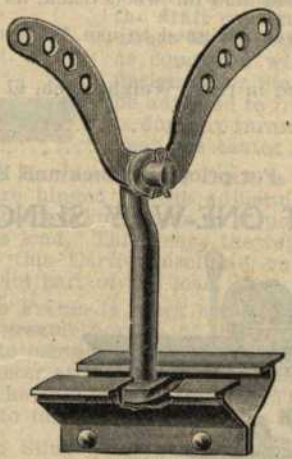
No. 148
Hanger



No. 572 Hanger
No. 573 Bracket

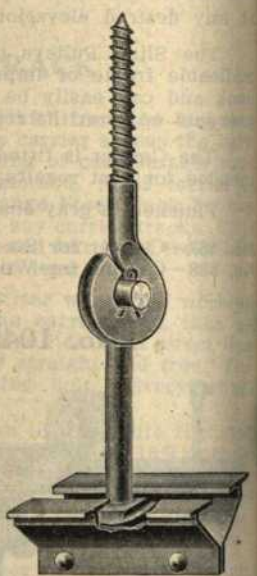
No. 782 or No. 148 Hanger Hook and No. 126 Bracket for use where an adjustable Hanger is not required. By use of No. 572 and No. 573 the position of the Hay Carrier can be accurately adjusted. The bracket is so shaped that it holds the nut and absolutely prevents it from turning when track is in use.

No. 782—Wt. per doz., 5 lbs.....Per doz., 2.25
No. 126—Wt. per doz., 3¾ lbs.....Per doz., 1.00
No. 148—Wt. per doz., 4 lbs.....Per doz., 2.25
No. 572—Wt. per doz., 5¼ lbs.....Per doz., 2.25
No. 573—Wt. per doz., 3¾ lbs.....Per doz., 1.00



No. 1044 Hanger
No. 1043 Bracket

No. 1044
Hanger



No. 1044 Hanger
No. 1073 Screw

No. 1043 Rafter Bracket is used with No. 1044 Hanger, as shown. This combination eliminates more than half the work of installing hay carrier track. No. 1044 slips into the end of section of track. They hook into the brackets and are held in place by a cotter pin or wire nail.

No. 1043—Wt. per doz., 3¾ lbs.....Per doz., 1.00
No. 1044—Wt. per doz., 5¼ lbs.....Per doz., 2.25
No. 1073—Wt. per doz., 11 lbs.....Per doz., 1.80

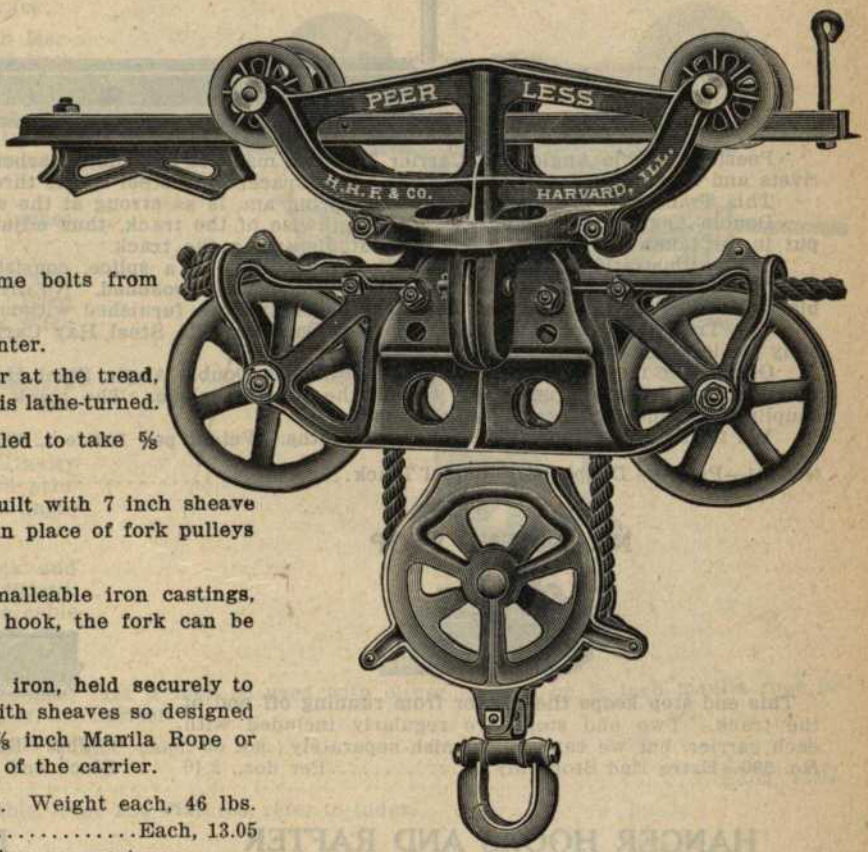
WOOD TRACK HANGERS

Made of ½ inch iron in three sizes.

No. 84A—12-inch; weight per doz., 9¾ lbs.....Per doz., 1.75
No. 84B—14-inch; weight per doz., 10¾ lbs.....Per doz., 1.90
No. 84C—16-inch; weight per doz., 12 lbs.....Per doz., 2.00

Peerless Hay Carriers

No. 710 FORK CARRIER FOR STEEL TRACK



This No. 710 Peerless Hay Carrier is a reversible fork carrier for use on double angle steel track. In center drive barns, carrier can be swiveled for filling either end.

The improved type of Gravity Lock built on the double grapple principle does away with the rusting and breaking of springs. The open or flaring mouth of the carrier permits the fork pulley to enter without trouble.

The Harvester Nut Lock prevents the frame bolts from working loose and insures rigidity.

The wheel base is 15½ inches, center to center.

The tracker wheels are 3 inches in diameter at the tread, hub drilled to take ⅝ inch steel axle. The axle is lathe-turned.

The sheaves, 7 inches in diameter, are drilled to take ⅝ inch turned steel axle.

The Fork Pulley of improved design, is built with 7 inch sheave and sister hook. Sling Pulleys may be used in place of fork pulleys when desired.

The Sister Hook is constructed of two malleable iron castings, swiveling on steel bolt. By the use of this hook, the fork can be quickly detached.

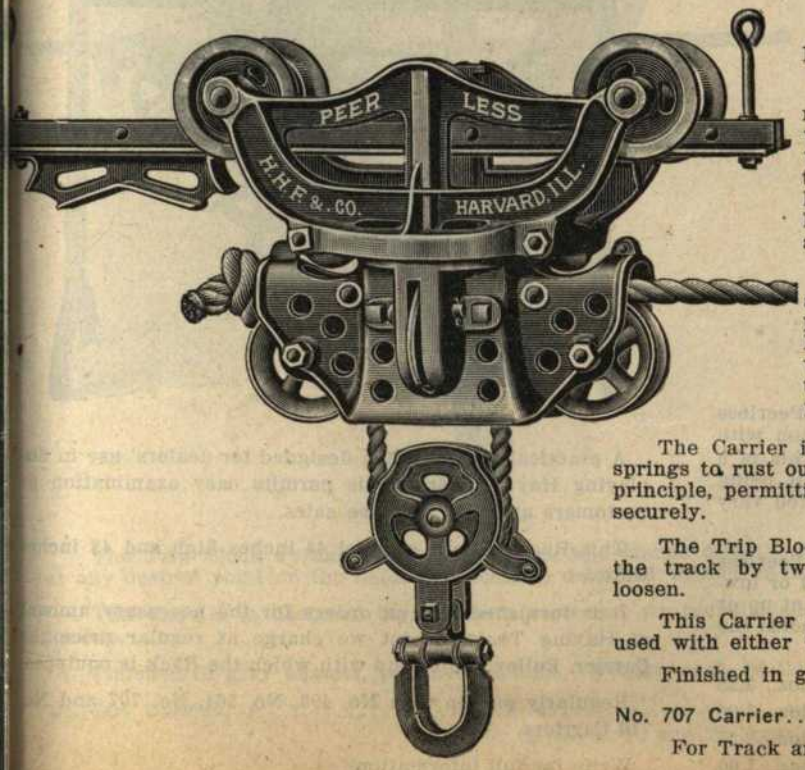
The trip block is made of best malleable iron, held securely to the track by two bolts. This carrier is fitted with sheaves so designed that it may be used with either ¾ inch or ⅞ inch Manila Rope or ⅜ inch Wire Cable and without any changing of the carrier.

Finished in gray enamel, trimmed in blue. Weight each, 46 lbs.

No. 710 Carrier.....Each, 13.05

For Track and Hangers and Carrier Display, see next page.

No. 707 FORK CARRIER FOR STEEL TRACK



No. 707 is a reversible Fork Carrier for Peerless Double Angle Steel Hay Carrier Track.

The frame is malleable iron, fully reinforced. The nut lock is used to prevent the frame bolts from working loose, and insures absolute rigidity. The wheel base is 13 inches, center to center. The tracker wheels are 3 inches in diameter at the tread, hub drilled to take ⅝ inch steel axle. The axle is lathe-turned. The sheaves, 4 inches in diameter, are drilled to take ⅝ inch steel axle.

The Fork Pulleys, of latest design, are mounted in a heavy frame, which is reinforced at the locking portion. All fork pulleys are supplied with the Sister Hook, same as No. 710. Fork pulleys are furnished with rope guards, making it impossible for the rope to leave the sheave. Sling Pulleys may be used in place of Fork Pulleys when desired.

The Carrier is fitted with an improved type of gravity lock, no springs to rust out or break. This lock embodies the double grapple principle, permitting the pulley to enter at any angle and holding it securely.

The Trip Block is made of best malleable iron, held securely to the track by two bolts, thus making it absolutely impossible to loosen.

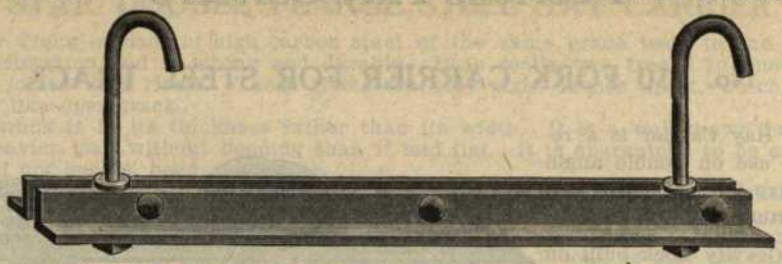
This Carrier is fitted with sheaves so designed that it may be used with either ¾ inch or ⅞ inch manila rope.

Finished in gray enamel, trimmed in blue. Weight each, 33 lbs.

No. 707 Carrier.....Each, 10.80

For Track and Hangers and Carrier Display, see next page.

No. 581 PEERLESS DOUBLE ANGLE STEEL TRACK



Peerless Double Angle Hay Carrier Track is made of two high carbon heavy angle steel rails, securely joined by rivets and spacers at frequent intervals. The spacers are steel spools through which the rivets pass.

This Track will not buckle, bend nor spring and is as strong at the splice joint as at any other place.

Double Angle Track Hangers slide lengthwise of the track, thus adjusting to any rafter bracket. Hangers may be put in, or taken out if necessary, without disturbing the track.

In one illustration below is shown the construction of a splice, consisting of malleable iron, one section above, and one section below, and so locked that it cannot become loosened. No drilling or punching is necessary to fit the splice blocks as they are shipped complete with bolts and are furnished without extra charge.

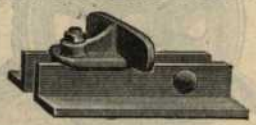
The Trip Block, used with the Peerless Double Angle Steel Hay Carrier Track, locks to the track and cannot possibly jar loose or slide.

One of the most desirable features of Peerless Double Angle Steel Hay Carrier Track is the ease with which it is installed, requiring a wrench only to bolt the splice in place. The track is shipped complete, ready to install. Track couplings included with track without charge.

We furnish this track in 6 or 12-foot lengths. Weight per 100 feet, 200 lbs.

No. 581—Peerless Double Angle Steel Track.....Per 100 ft.. 27.00

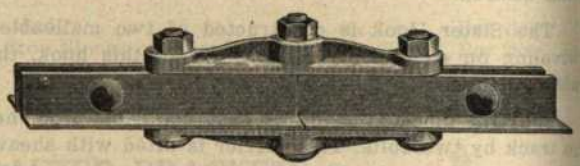
No. 590 END STOP



This end stop keeps the carrier from running off end of the track. Two end stops are regularly included with each carrier, but we can also furnish separately.

No. 590—Extra End Stop only.....Per doz., 2.40

No. 582 TRACK SPLICE



This illustration shows the construction of a Splice Block and the method of holding the track together.

HANGER HOOKS AND RAFTER BRACKETS

No. 126.

No. 573.

No. 584.

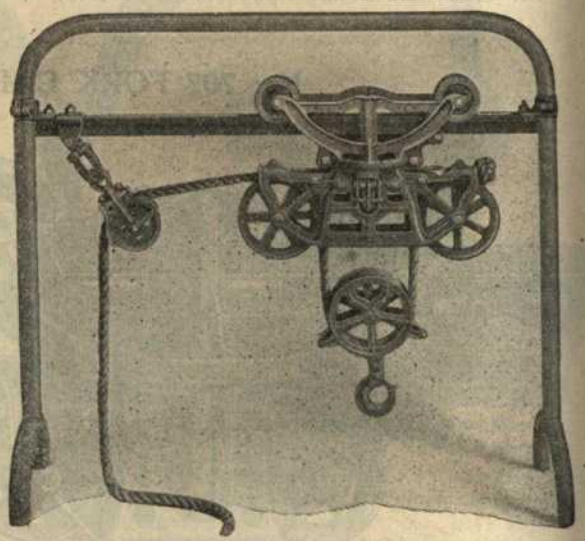
No. 588.

No. 584 is an adjustable Hanger Hook for Peerless Double Angle Steel Track. It is used in connection with the regular pattern of rafter bracket, No. 126. This is a very good pattern of hook to use on account of it being easy to install the track. The track can be adjusted very easily.

By using No. 588 Hanger and No. 573 Bracket, Peerless Track can be closely adjusted. The track is raised or lowered by simply lifting the track and screwing the nut up or down on the hanger. The bracket is shaped so it holds the nut from turning when the track is in use.

No. 584—Weight per doz., 6 lbs.....Per doz., 2.25
No. 126—Weight per doz., 3¾ lbs.....Per doz., 1.00
No. 588—Weight per doz., 5¼ lbs.....Per doz., 2.25
No. 573—Weight per doz., 3¾ lbs.....Per doz.. 1.00

DEALERS' DISPLAY RACK



A practical Display Rack designed for dealers' use in displaying Hay Carriers. This permits easy examination by customers and will increase sales.

This Rack is built of steel 44 inches high and 48 inches wide.

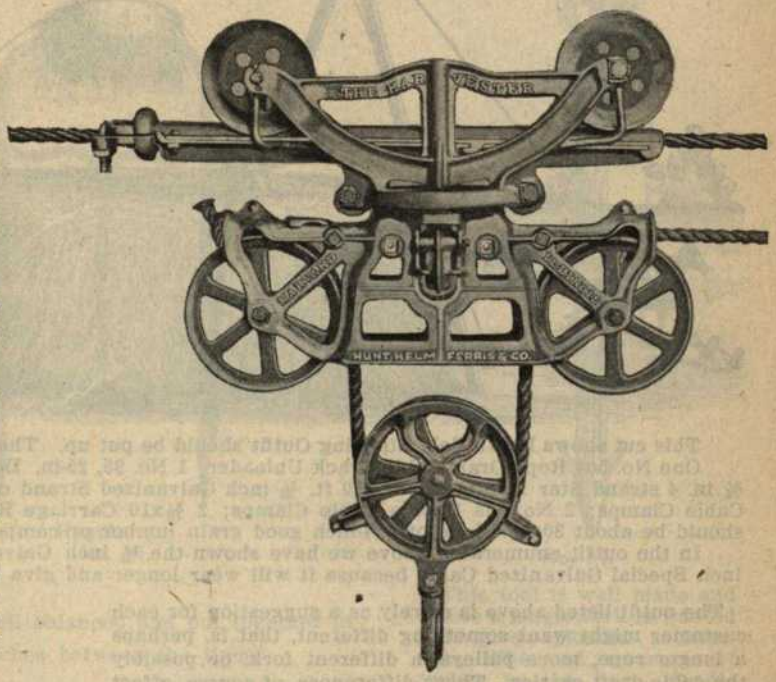
It is furnished free on orders for the necessary amount of Haying Tools, except we charge at regular price the Carrier, Pulley and Clamp with which the Rack is equipped.

Regularly put up with No. 493, No. 564, No. 707 and No. 710 Carriers.

Write for full information.

Harvester Cable Track Hay Carriers

No. 496 FORK CARRIER FOR CABLE TRACK



No. 496 Hay Carrier is designed for Cable Track.

The frame is fully reinforced, equipped with Harvester Nut Lock same as No. 493. The wheel base is 15½ inches, center to center.

The Harvester No. 496 is a reversible Fork Carrier fitted with trucks and tracker wheels specially designed for ½ or ⅝ inch cable or rod. The tracker wheels revolve on ½ inch steel axles.

The axle is lathe-turned. The sheaves, 7 inches in diameter, are drilled to take steel axle.

The Fork Pulley, of improved design, is fitted with 7 inch sheave and self-closing fork hook. Sling Pulleys may be used in place of Fork Pulleys when desired.

The Self-Closing Fork Hook is a special feature with all Harvester Carriers. By the use of this hook, the fork may be quickly detached.

This Carrier has an improved type of Gravity Lock. This lock embraces the double grapple principle, permitting the pulley to enter at any angle and holding it securely.

The Trip Block swings loose on the track and stands directly under the cable under all conditions. It can be located at any point desired on the cable or it can be detached without taking down the cable.

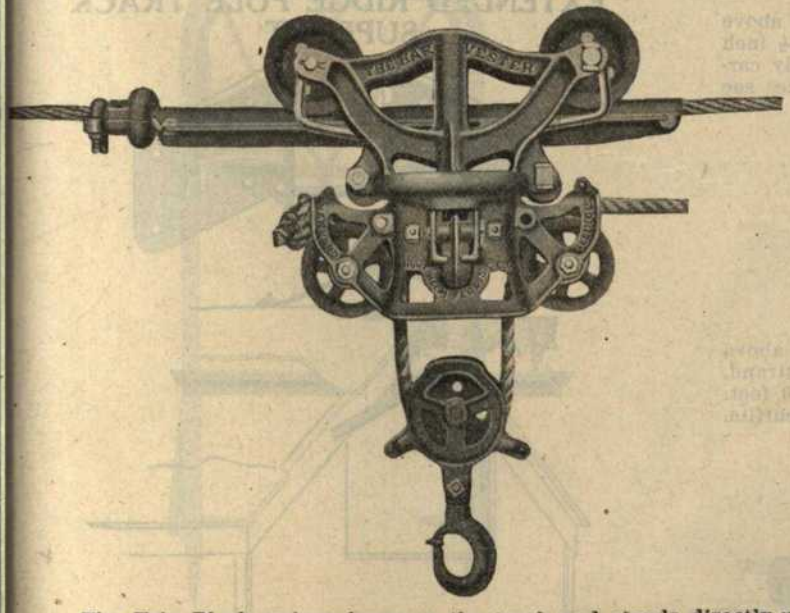
This Carrier is fitted with sheaves so designed that it may be used with either ¾ inch or ⅞ inch manila rope or ⅜ inch wire cable and without any changing of the Carrier.

Finished in gray enamel, trimmed in blue. Weight each, 54 lbs.

No. 496 Carrier.....Each, 13.05

For Cable, Rope and Fixtures, refer to Index.

No. 504 FORK CARRIER FOR CABLE TRACK



No. 504 is a reversible Fork Carrier for use on Cable or Rod Track

The Frame is made of best grade malleable iron. Equipped with Harvester Nut Lock. same as No. 493. The wheel base is 11½ inches, center to center.

The trucks and tracker wheels are designed to fit ½ or ⅝ inch cable track. The tracker wheels revolve on ½ inch steel axles.

The axle is lathe-turned. The sheaves, 4 inches in diameter, are drilled to take ⅝ inch steel axle.

All fork pulleys are supplied with self-closing fork hooks for holding fork, including a universal joint between the fork pulley and fork hook, allowing great freedom of movement. Fork pulleys are furnished with rope guards, making it impossible for the rope to leave the sheave.

The Self-Closing Fork Hook is a special feature with all Harvester Carriers By the use of this hook a fork may be quickly detached.

This Carrier has an improved type of Gravity Lock. This lock embodies the double grapple principle, permitting the pulley to enter at any angle and holding it securely.

The Trip Block swings loose on the track and stands directly under the cable under all conditions. It can be located at any desired point on the cable or it can be detached without taking the cable down.

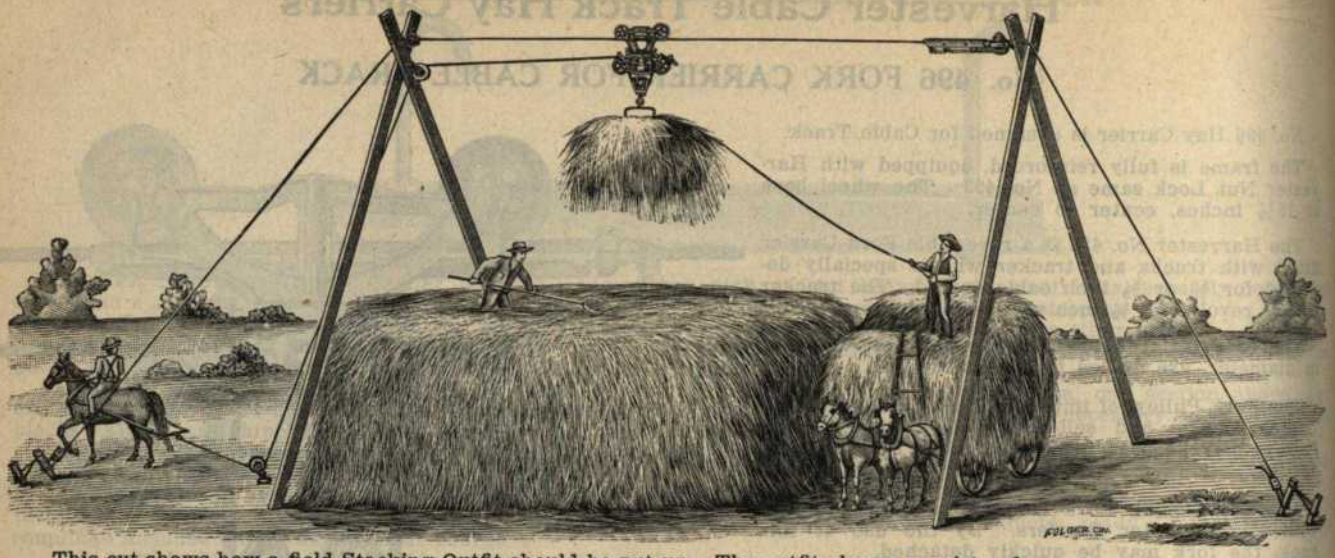
This Carrier is designed for use with rope and we recommend ¾ or ⅞ inch pure manila as being the most serviceable.

Finished in gray enamel, trimmed in blue. Weight each, 38 lbs.

No. 504 Carrier.....Each, 10.80

For Cable, Rope and Fixtures, refer to Index.

FIELD STACKING OUTFIT



This cut shows how a field Stacking Outfit should be put up. The outfit shown consists of:

One No. 504 Rope Draft Cable Track Unloader; 1 No. 95, 25-in. Double Harpoon Hay Fork; 2 No. 103 Pulleys; 130 ft. ¾ in. 4 strand Star Manila Rope; 150 ft. ½ inch Galvanized Strand or ⅝ inch Special Galvanized Cable; 2 No. 946 Single Cable Clamps; 2 No. 936 Double Cable Clamps; 2 ⅜x10 Carriage Bolts for Poles. We do not furnish the poles, but they should be about 30 feet long of 4x4-inch good grain lumber or comparative size of unsawed poles.

In the outfit enumerated above we have shown the ½ inch Galvanized Steel Strand, but a great many prefer the ⅝ inch Special Galvanized Cable because it will wear longer and give better satisfaction.

The outfit listed above is merely as a suggestion for each customer might want something different, that is, perhaps a longer rope, more pulleys, a different fork, or possibly the cable draft carrier. These differences, of course, affect the price, but can easily be figured by referring to the various items wanted as listed separately in this catalog. The outfit as listed, however, is one that is used quite frequently and will give excellent satisfaction.

GALVANIZED STEEL STRAND

This Galvanized Steel Strand as listed in the above stacking outfit is composed of seven No. 8 wires, is ½ inch diameter; weight, 52 pounds per 100 feet. Regularly carried in 150 ft. lengths for stacking outfits. For prices see page 630.

SPECIAL GALVANIZED CABLE

This Special Galvanized Cable as listed in the above stacking outfit is composed of 6 strands, 7 wires to strand, hemp center. ⅝ inch in diameter, 62 pounds per 100 feet. Regularly carried in 150 ft. lengths for stacking outfits. For prices see page 630.

No. 946 SINGLE CABLE CLAMP

No. 936 DOUBLE CABLE CLAMP

These illustrations show the clamps listed with above stacking outfit.

The single clamps are set just inside the poles to prevent their slipping, and the double clamps are used to make the loops at the end of the cable.

SPECIAL RIDGE POLE BRACKETS

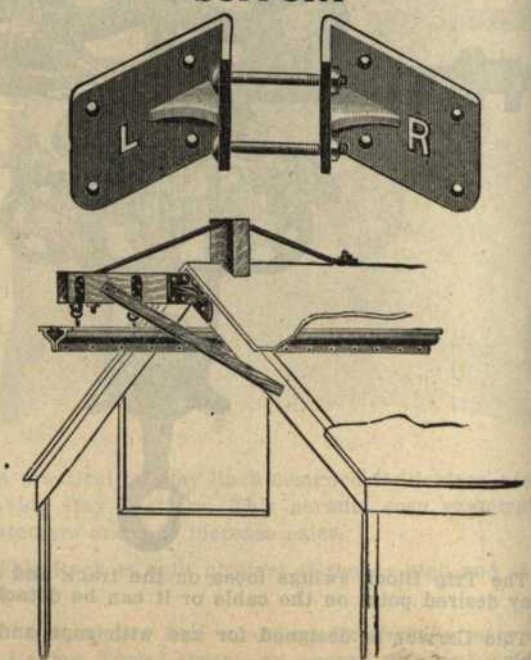
No. A is used for attaching Track to Ridge Pole at end of barn.

No. A.....Per doz., 1.80

No. B is used for supporting Ridge Pole to rafters.

No. B.....Per doz., 2.40

EXTENDED RIDGE POLE TRACK SUPPORT

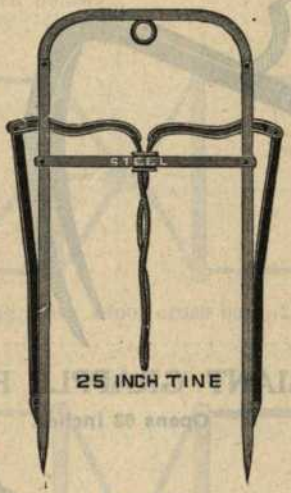


Used for extending Ridge Pole outside of end of barn to support Hay Carrier Track. A set consists of one each Right and Left Brackets, 2 No. A Ridge Pole Brackets and a bar of iron ½ inch by 8 ft. to act as a support as shown.

No. 73—Complete.....Per set, 4.50

DOUBLE HARPOON HAY FORKS

Extra Length.
No. 97.



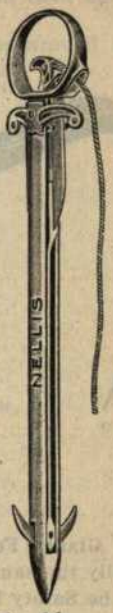
Regular.
No. 95.

These Forks are all made of high quality steel, well balanced and put together in good shape. Japanned finish. Regular width, 15½ inches between the tines.

No. 95—Tines 25 inches long under cross bar, weight each 16 lbs.....Each, 2.90

No. 97—Tines 31 inches long under cross bar. weight each 25 lbs.....Each, 3.15

NELLIS HARPOON FORK

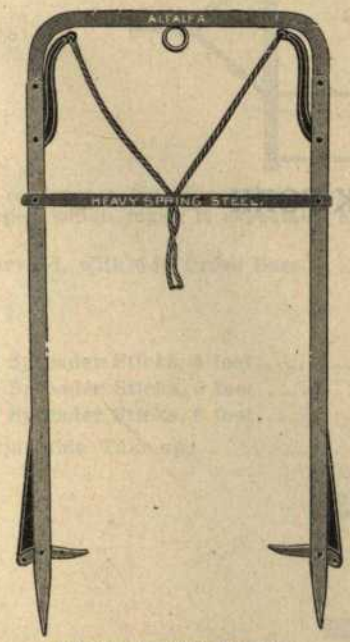


No. 94.

This tool is well made and where a single fork is wanted will give splendid satisfaction. When set, measures 27 inches in the hay. Handle painted green and red. Harpoon is polished and varnished. Weight each, 11 lbs.

No. 94.....Each, 5.80

DOUBLE HARPOON ALFALFA FORK

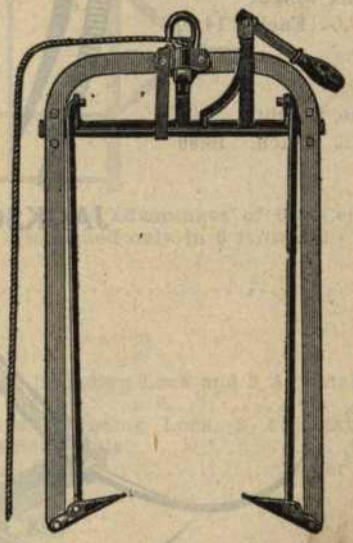


Alfalfa (Extra Heavy).
No. 98.

Made of steel, extra large and strong. Japanned finish. Length of tines under cross-bar, 33 inches. Width between tines, 20½ inches. Weight each, 39 lbs.

No. 98—Alfalfa. .....Each, 5.80

LOCK LEVER FORK

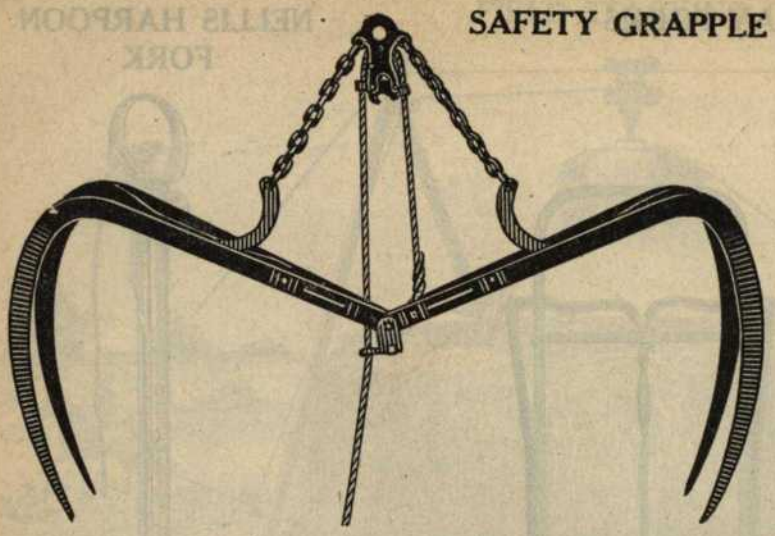


No. 96

While this Fork is not larger than the regular double harpoon except in width, it will handle larger loads because the cross bar is placed so near the top. Length under the cross bar is 30 inches and 19 inches wide. It has only one lever and locks either open or closed. Japanned finish. Weight each, 24 lbs.

No. 96—Lock Lever. .....Each, 6.85

SAFETY GRAPPLE FORK



This Fork is made of high carbon steel, double braced. 19 inches wide between outside tines and spreads 55 inches to enter the hay. This fork is not only balanced at all points, but in addition the natural pull on the trip rope closes the Fork and locks it. This eliminates the danger of an open fork descending to the load over the operator. The lock is already set when it lights, so that all the operator has to do is to pick it up and place it in the hay as desired and it is ready for the next load. Trips easily from any direction. Handles loose or baled hay.

No. 559—4-tine, weight 40 lbs....Each, 13.15

No. 558—6-tine, weight 47 lbs....Each. 15.25

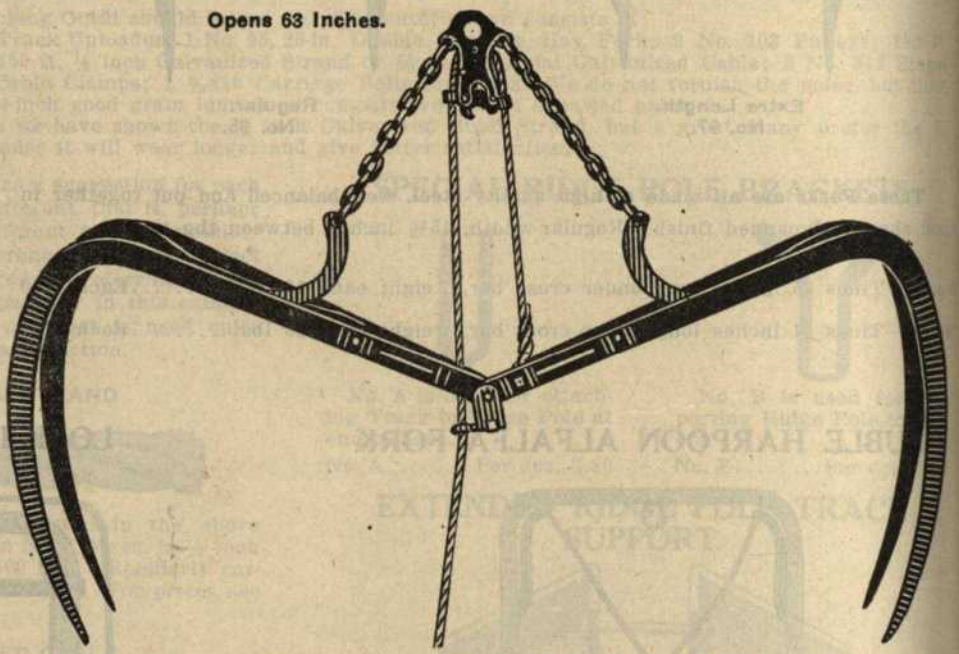
GIANT GRAPPLE FORK

Opens 63 Inches.

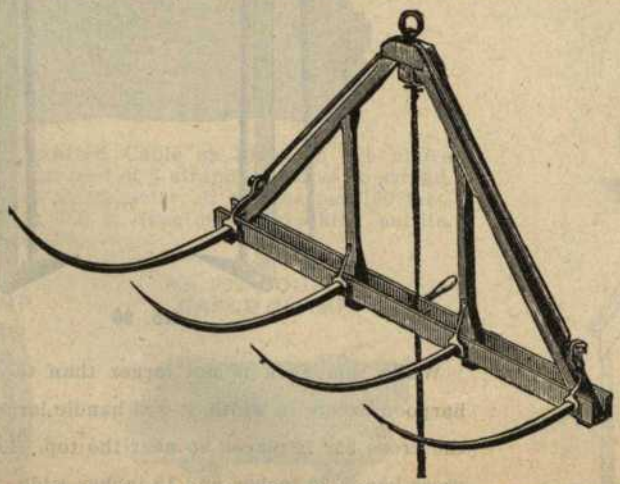
This Giant Fork is of identically the same construction as the Safety Fork above, except in size. The Giant measures 22 inches between outside tines and opens 63 inches to enter the hay. Made of high carbon steel, thoroughly double braced. It is balanced the same as the Safety Fork and has the same special features as well as extra large capacity.

No. 833—4-tine, weight 49 lbs. . .....Each. 14.70

No. 834—6-tine, weight, 57 lbs. . .....Each, 16.80



JACKSON PATTERN DERRICK FORK



This Fork is made in three sizes. The 4½-ft. has 4 tines and the larger sizes have 6 tines.

Tines are made of spring steel. Wood parts are well made, all riveted and bolted together so as to give greatest possible strength. Wood handle is convenient in handling and setting the fork.

No. 1392 —4½-ft., with 4 tines, weight 53 lbs.....Each, 21.00
No. 1392A—5 -ft., with 6 tines, weight 72 lbs.....Each, 25.20
No. 1392B—6 -ft., with 6 tines, weight 75 lbs.....Each. 26.25

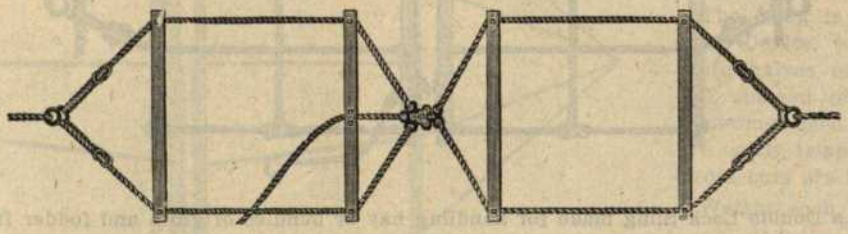
CENTER TRIP ADJUSTABLE HAY SLINGS

The Ropes are ½-inch, very strong, and will not kink. They are fitted with an adjustable take-up on each end, which enables the user to adjust the length of the Sling as desired.

The Cross Bars are heavy and strong. Ropes are attached by means of a hook bolt which passes around the rope and through the bar, holding it in place by a nut and washer.

The Lock is of the Center Trip type as shown below.

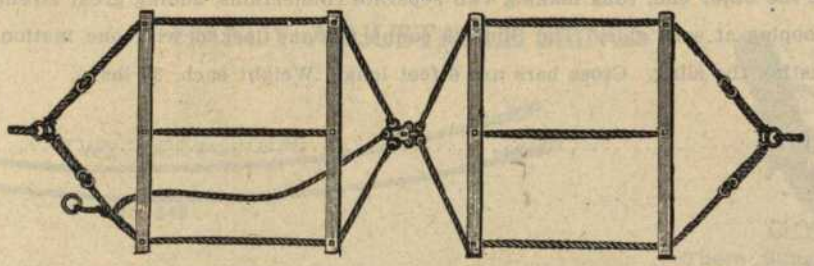
No. 55.



No. 55 represents a Center Trip Adjustable Sling, with 4-foot cross bars, 2 ropes. Weight each, 18 lbs.

No. 55—With 4-foot Cross Bars.....Each, 5.00

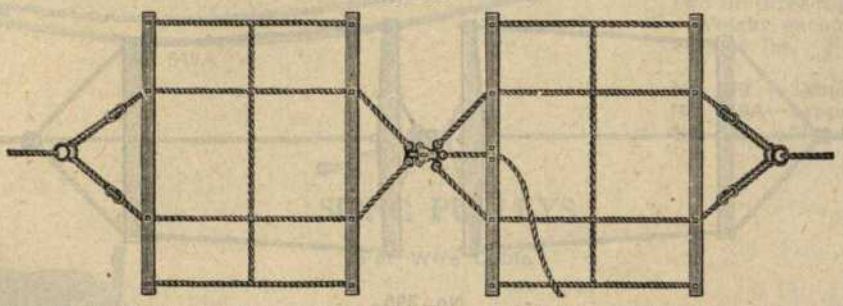
No. 58.



No. 58 represents a Center Trip Adjustable Sling, with 5 foot cross bars, 3 ropes. Weight each, 21 lbs.

No. 58—With 5-foot Cross Bars.....Each, 6.80

No. 56A



No. 56A represents the Harvard Center Trip Adjustable Sling which has all the advantages of the Center Trip but has extra ropes which make it especially adaptable for handling fine hay. Furnished only in 6 ft. width. Weight each, 32 lbs.

No. 56A—Harvard, with 6-ft. Cross Bars.....Each, 8.10

Repairs for Slings.

Extra Wood Spreader Sticks, 4 feet.....Each, $0.70
Extra Wood Spreader Sticks, 5 feet.....Each, $0.90
Extra Wood Spreader Sticks, 6 feet.....Each, $0.90
No. 815—Adjustable Take-up.....Each, $0.90

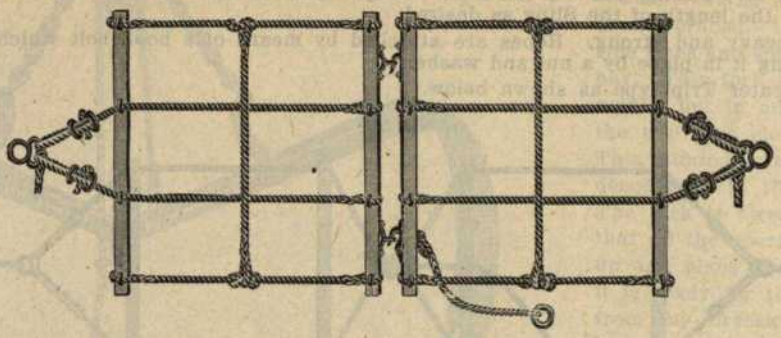
Sling Castings, including Lock and 2 Adjustable Take-ups for ends.....Per set, $4.30
Sling Castings, including Lock, 2 Adjustable Take-up and 8 hook bolts.....Per set, $6.00
Hook Bolts.....Per set (8), $1.40

CENTER TRIP SLING LOCKS

The Lock is made of malleable iron in one size only; has but three pieces; is light, strong and durable. This Lock is used on all of the above Slings.

No. 57.....Each, 1.30

DOUBLE LOCK ADJUSTABLE HAY SLINGS

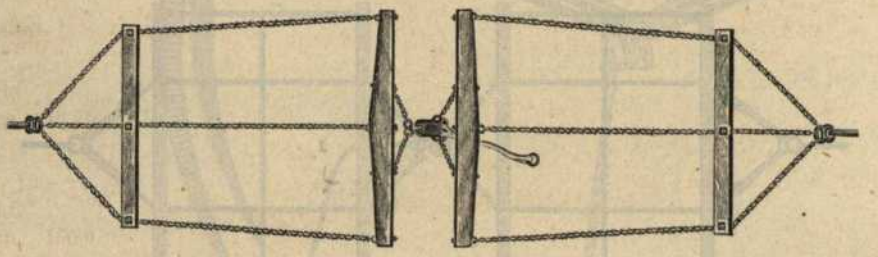


No. 769 represents a Double Lock Sling made for handling hay or bundles of grain and fodder from the wagon.

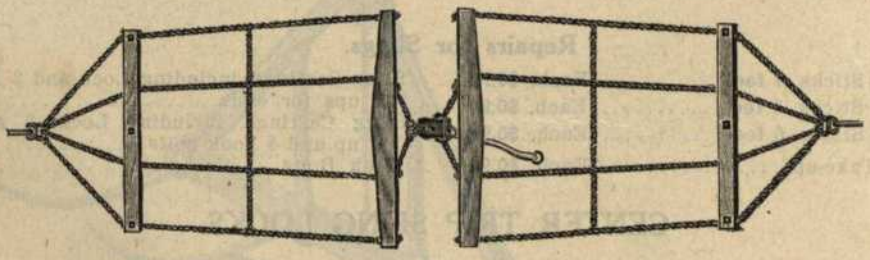
The Sling, as will be noted, has two connections between the two halves of the Sling instead of the one center lock as generally used. The construction of this double lock device is such that we use a hook and eye at one end of the sling stick and a lock at the other end, thus making two separate connections, adding great strength and causing the load to be carried without drooping at each side. The Sling is connected and locked with one motion. Each end has an adjustable take-up for adjusting the sling. Cross bars are 6 feet long. Weight each, 36 lbs.

No. 769—6-foot. . . . . Each, 9.45

CENTER TRIP CHAIN SLINGS



No. 395.



No. 479

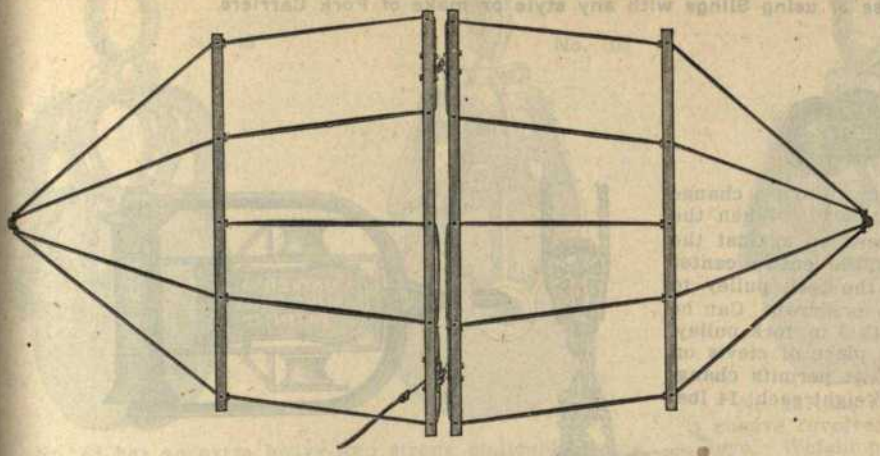
Nos. 395 and 479 are Chain Slings recommended for heavy work, handling hay or bundles of grain and fodder from the wagon. Extra strong non-kinking galvanized chain is used. The bars next to the sling lock are thicker at the center than at the end, insuring great strength. The two center bars come closely together, only 14 inches apart, thus small bundles may be raised without becoming loosened or falling out of the sling. No. 395 corresponds with No. 58 Rope Sling. No. 479 corresponds with No. 56A Rope Sling, and has 4 chains lengthwise, one chain across. Both slings equipped with regular Center Trip Sling Lock. Weight each: No. 395, 28 lbs.; No. 479. 39 lbs.

No. 395—5-foot. . . . . Each, $7.50

No. 479—6-foot. . . . . Each, $8.70

CABLE GROUND SLINGS

Used for Stacking With a Pole Derrick from Bull Rake



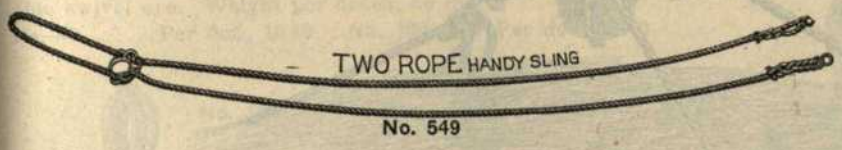
No. 1309 represents a Cable Ground Sling, 16 feet long, constructed of flexible wire cable instead of rope as ordinarily used for Sling purposes.

The Sling is fitted with a Double Lock Device, which engages the separate halves of the Sling at either end, instead of the center lock, as sometimes used for this purpose. They are easily tripped and do not tangle. Cross bars are 8 feet long.

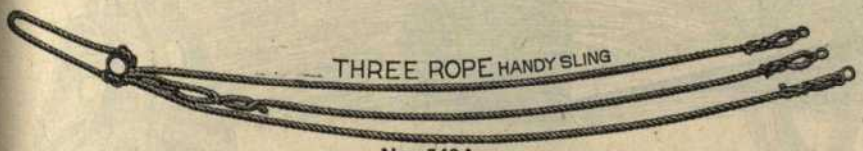
Weight each, 65 lbs.

No. 1309—8-foot.....Each, 24.15

HANDY ADJUSTABLE SLINGS



No. 549



No. 549A

CLOSED

No. 591

Handy Sling Lock

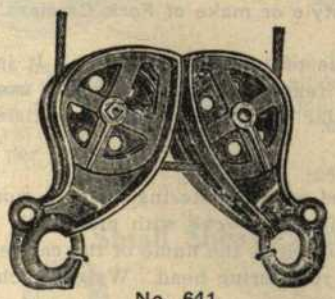
These Slings are made of ½-inch Manila rope. Equipped with adjustable take-up, so Sling can be lengthened or shortened to suit the user. No. 591 Lock can be used with either two or three-rope slings.

Weight each: No. 549, 5 lbs; No. 549A, 6 lbs.

	Each
No. 549 —2-rope Handy Sling...	1.90
No. 549A—3-rope Handy Sling...	2.60
No. 591 —Handy Sling Lock....	1.30

SLING PULLEYS

For Wire Cable



No. 641

The Sheaves in both sizes are grooved to take ⅜ to ½-inch Cable. No. 641 has 6½-inch Sheaves and weighs 14 lbs. per pair. No. 641A has 4-inch Sheaves and weighs 10 lbs. per pair.

No. 641 —With 6½-inch Sheaves. . .....Per pair, 6.75

No. 641A—With 4-inch Sheaves. . .....Per pair, 3.75

FORK CLEVIS

It is frequently desired to use a hay fork with a sling carrier. This Fork Clevis may be used with any sling carrier, and with either parallel or right angle sling pulleys. The fork may be hung in the middle or one-third way from either end, as may be necessary to balance it with double or triple draft.

Fork and Sling may be interchanged in a moment; there is no time lost in making the transfer. Weight each, 3½ lbs.

No. 471—Fork Clevis. . .....Each, 1.50

Price includes Clevis only. Pulley or Fork extra.

SLING PULLEYS

For Manila Rope

No. 824A

We can furnish either singly or in pairs. Practically the same as No. 641 except the 4-inch sheaves are grooved to take Manila rope in place of wire cable. Weight, 14 lbs. per pair.

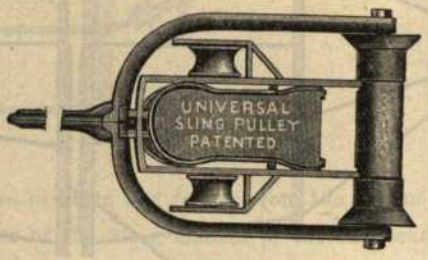
No. 824A —In pairs. . .....Per pair, 5.25

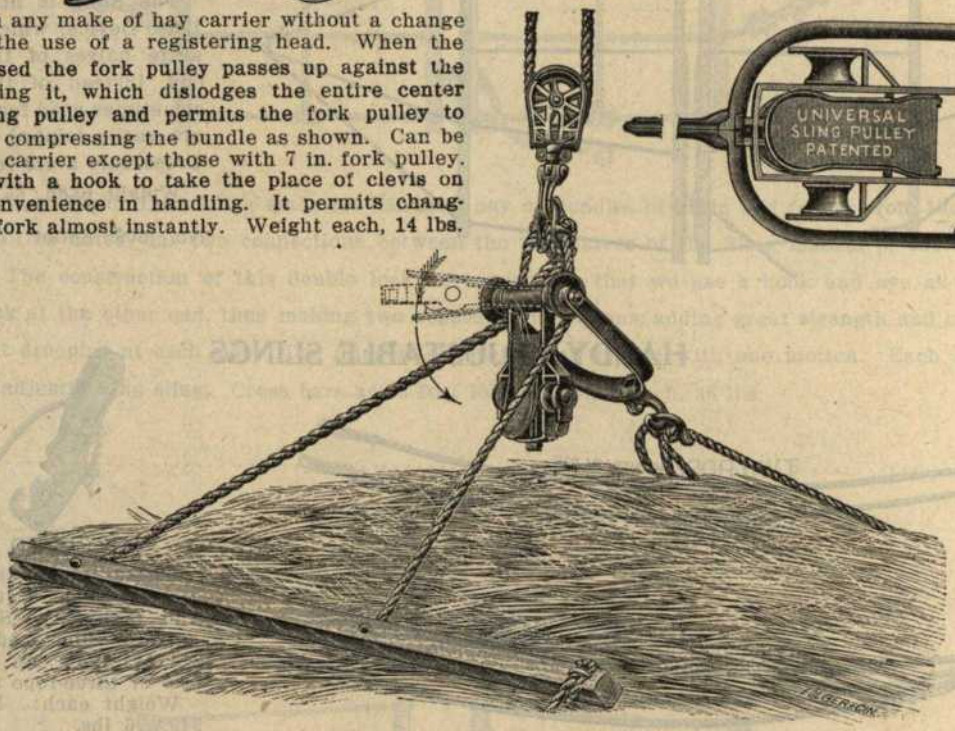
No. 824AS—Single Pulleys. .....Each, 2.65

No. 1052 UNIVERSAL REVERSIBLE SLING PULLEY

Designed for the purpose of using Slings with any style or make of Fork Carriers.

Can be used with any make of hay carrier without a change of fork pulley or the use of a registering head. When the bundle is compressed the fork pulley passes up against the sling pulley, tripping it, which dislodges the entire center section of the sling pulley and permits the fork pulley to pass through, thus compressing the bundle as shown. Can be used with any hay carrier except those with 7 in. fork pulley. It is furnished with a hook to take the place of clevis on fork pulley, for convenience in handling. It permits changing from slings to fork almost instantly. Weight each, 14 lbs.





No. 1052—Universal Sling Pulley.....Each, 4.80

No. 553 SELF-LOCKING SLING PULLEY

Designed for the purpose of using Slings with any style or make of Fork Carriers.

This pulley enables the farmer to use hay slings with the ordinary fork carrier. It is equipped with a casting on the top which is exactly the same as the regular registering head used on the carrier. This pulley is put on the rope in place of the regular fork pulley and the registering head will work just as well as the original.

Unless otherwise specified we ship these pulleys equipped with registering head to work in Harvester Hay Carriers. We can also furnish other registering heads to work with practically any make or style of carrier. In ordering these special heads be sure to tell us the name of the carrier, name of the manufacturer, and if possible the number of the regular registering head. Weight each, 12 lbs.

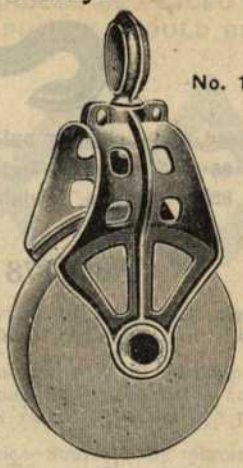
No. 553—Self-Locking Sling Pulley.....Each, 4.65
Extra Registering Heads only, separately.....Each, .60

A BARN TO BE STRICTLY MODERN SHOULD BE "STAR EQUIPPED"

Ask for Complete Star Catalog Showing Steel Stalls, Litter Carriers, Etc.

Knot-Passing Pulleys

No. 48

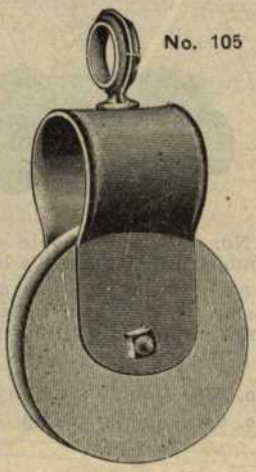

No. 103

No. 48 has an extra heavy and strong malleable frame. 6-inch hard maple sheave revolves on large hollow pin. Malleable swivel eye. Shape of frame prevents chafing of rope. Weight per dozen, 40 lbs.

No. 103 has a special design malleable frame. 6-inch hard maple sheave revolves on large hollow pin. Malleable swivel eye. Weight per dozen, 36 lbs.

No. 48.....Per doz., 10.80 **No. 103**.....Per doz., 11.10

No. 104


No. 105

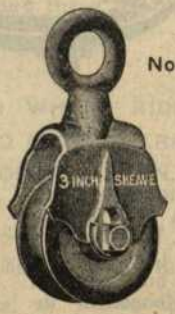
No. 104 has the same frame as No. 103 but is fitted with 6-inch cast iron sheave. Weight per dozen, 40 lbs.

No. 105 has a wrought steel frame. 6-inch hard maple sheave revolves on large bushing. Malleable swivel eye. Weight per dozen, 35 lbs.

No. 104.....Per doz., 12.00 **No. 105**.....Per doz., 7.50

Small Sheave Pulleys

No. 155



No. 1506

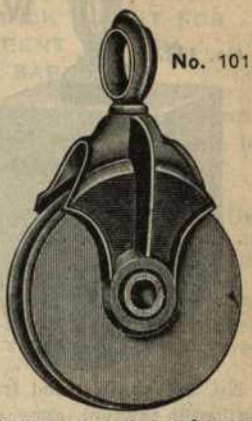
No. 155 is a small malleable frame, knot-passing pulley. 4-inch iron sheave. Malleable swivel eye. Weight per dozen, 32 lbs.

No. 1506 is a cast frame pulley especially designed for trip ropes, return ropes, etc. 3-inch iron sheaves. Weight per dozen, 24 lbs.

No. 155.....Per doz., 15.00 **No. 1506**.....Per doz., 5.05

Plain Pulleys

No. 127.

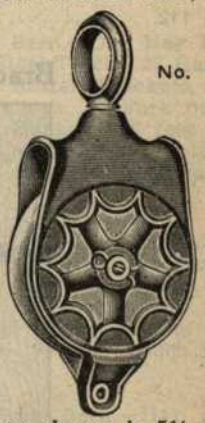

No. 101.

No. 127 has a heavy malleable frame. 6-inch hard maple sheave revolves on a large hollow pin. Malleable swivel eye. Weight per dozen, 36 lbs.

No. 101 has a cast frame of special design. 6-inch hard maple sheave revolves on large hollow pin. Swivel eye. Weight per dozen, 38 lbs.

No. 127.....Per doz., 9.00 **No. 101**.....Per doz., 8.20

No. 109


No. 110.

No. 109 is an all iron pulley. Iron sheave is 5½ inch diameter. Swivel eye. Weight per dozen, 41 lbs.

No. 110 is especially designed as a floor pulley. The frame protects the sheave clear around. 4½-inch hard maple sheave revolves on hollow pin. Malleable swivel eye. Weight per dozen, 30 lbs.

No. 109.....Per doz., 8.20 **No. 110**.....Per doz., 8.45

No. 1316

No. 43

No. 1316 has a malleable frame. The hard maple sheave is 7-inch diameter and revolves on 1-inch steel bushing, the ends of which are recessed into side of frame, making an exceptionally strong pulley. Malleable swivel eye. Weight per dozen, 66 lbs.

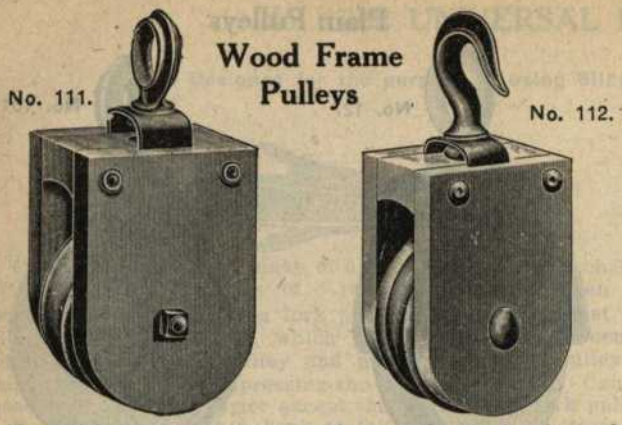
No. 1316....Per doz., 18.90

No. 43 has a steel frame fitted with 7-inch iron sheave grooved for ⅜ or ½-inch cable. Swivel hook Weight per dozen. 71 lbs.

No. 43—Plain Bearing. .....Per doz., 18.00

No. 43R—Roller Bearing. ... .Per doz., 22.05

Wood Frame Pulleys



No. 111 has a wood frame with wrought steel yoke and malleable swivel eye. 4½-inch hard maple sheave revolves on a large bushing. Weight per dozen, 36 lbs.

No. 112 is of the same construction as No. 111 except has a swivel hook in place of swivel eye. Weight per dozen, 35 lbs.

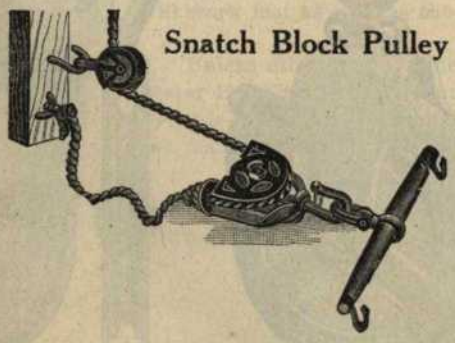
No. 111. . . . . Per doz., 8.20
No. 112. . . . . Per doz.. 8.20

Bracket Pulley Holder

This holder will support a pulley for carrying the draft rope through either the side or end of the barn. The pulley can be attached or removed from either inside or outside of the barn. Weight, each, 3 lbs.

No. 821. . . . . Each, 1 05

Snatch Block Pulley



Shortens the distance the horse travels one-half the length of track without reducing the elevating power.

Directions—Tie a knot in rope, leaving the slack rope sufficient length to elevate the bundle to carrier, and put the washer in front of knot; fasten end of slack rope to post near draft pulley (see cut). The rope can be thrown off the snatch pulley, and thus allow the fork to be returned to the load without waiting for the return of the horse. Weight per dozen, 48 lbs.

No. 90. . . . . Per doz., 16.50

Floor Hooks

Used for anchoring pulleys to beams or floor.

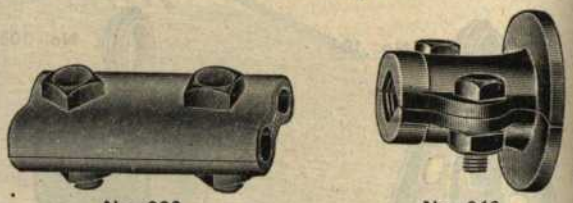
No. 85 —⅝x6 ins. Weight per doz., 8 lbs. Per doz., 1.90
No. 85A—¾x8 ins. Weight per doz., 12½ lbs. Per doz., 2.25

No. 1178 Pulley Sheaves

Diam. ins.	Hole ins.	Kind	Per doz.
4	¾	Wood	3.60
5	1	Wood	3.60
6	½	Wood	3.60
6	1	Wood	3.60
7	1	Wood	4.40
8	½	Wood	6.30
8	¾	Wood	6.30
5½	¾	Iron	4.40
6	1⅛	Iron	4.40

Weight: 4-in., 3 lbs.; 5-in., 6 lbs.; 6-in.. 12 lbs.; 7-in., 18 lbs.; 8-in., 24 lbs. per dozen.

Cable Clamps



No. 936. No. 946.

No. 936 is a double clamp and used where cable is doubled back to make a loop.

No. 946 is a single clamp especially designed to use just inside the poles on a field stacking outfit to prevent the poles slipping or falling toward the center.

A field stacking outfit requires two of each type.

No. 936—Double Clamp. Wgt. per doz., 16 lbs. Per doz., 6.30
No. 946—Single Clamp. Wgt. per doz., 18 lbs. Per doz., 4.20

Hoisting Singletree

Prevents the whiffletree from dragging and bumping the horse's heels. Weight each, 7 lbs.

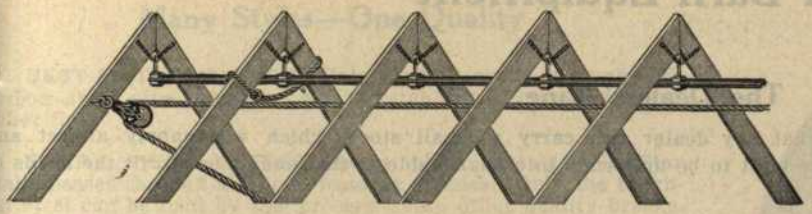
Each
No. 1100. . . . . 2.65

Rope Hitch

Unnecessary to tie a knot in the rope. Will not permit the rope to slip but yet can be loosened instantly. Hook is swiveled, eliminating any twist in the rope. Weight per dozen, 16 lbs.

Per doz.
No. 86. . . . . 4.95

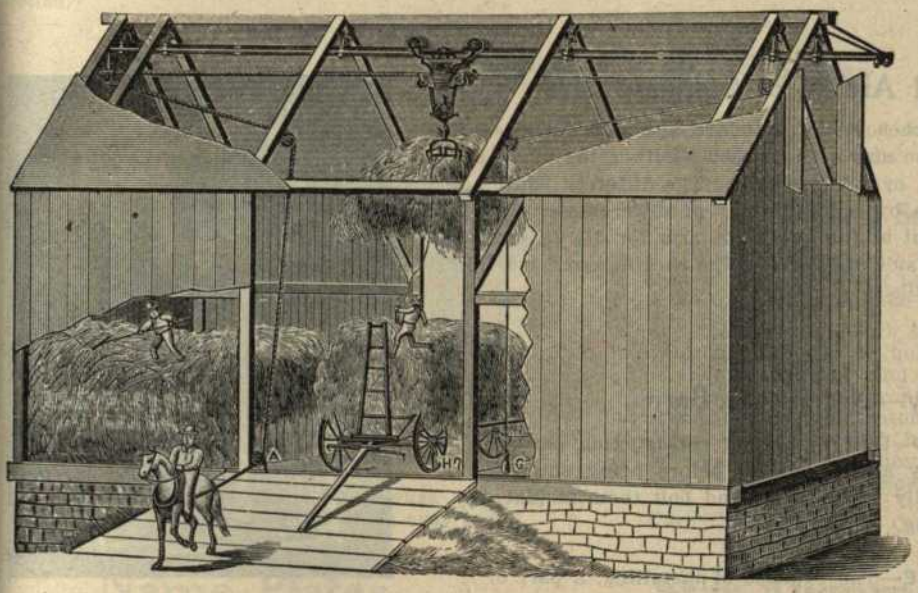
ILLUSTRATING HOW TRACK SHOULD BE PLACED IN BARN, ALSO ROPE STOP, AND HOW PULLEY SHOULD BE PLACED.



Place pulley to draw the carrier back into the mow directly under and in line with track, and not as shown in cut.

This cut shows how steel track should be put up and how rope is tied from one rafter to the other close under the track to make stop for carrier at end of barn. Also shows how rafter brackets are placed.

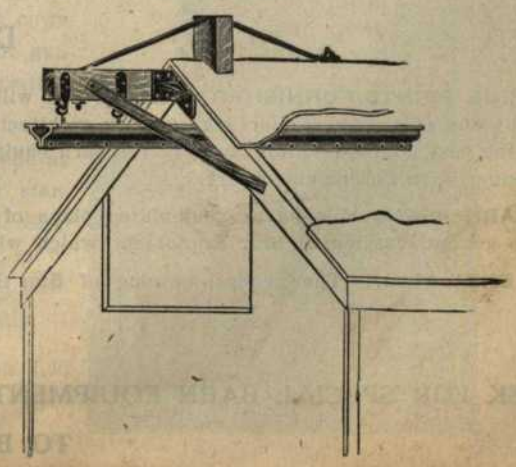
Directions for Erecting Track.—Scaffold by placing rope from rafter to rafter, say 6 feet from ridge pole or peak and about 10 feet apart. Then place extension ladder across the ropes with board to stand on. Now nail one rafter bracket at each end of barn and draw a line from one end to the other and stretch tight. This line should then be used as a guide in putting up the track and remainder of the rafter brackets. The track can be put up in sections and connected afterwards.



How to Reverse Carrier.—Set fork in hay. Tie ends of rope together, to which horse and weight are attached. Pull on small rope until knot comes to the floor, then untie ropes. Fasten weight G on small rope, change pulley A to floor hook H. This reverses carrier for opposite direction without leaving the floor or climbing up. Use all knot passing pulleys. For taking in hay at end of barn, track must extend out three or four feet beyond the barn and be well supported.

ILLUSTRATING MANNER IN WHICH RIDGE POLE SHOULD BE PLACED TO EXTEND TRACK BEYOND THE END OF THE BARN.

This illustrates manner of placing ridge pole at the end of barn to support track when hay is taken in from outside. By using heavy brackets, as shown in cut, the ridge pole is supported to the rafters. The track is then attached to the ridge pole by means of ridge pole hanger brackets (see No. A, page 578). This makes a very substantial support for the track and is easily placed in position. Size of Ridge Pole, 4x6 inches.



MATERIAL REQUIRED FOR A STEEL TRACK OUTFIT FOR DIFFERENT LENGTH BARNS.

The following lists are only approximate and simply serve as a guide in determining requirements.

For a 40 Foot Barn.—One Hay Unloader. 36 feet Steel Track. 19 Hanging Hooks. 19 Rafter Brackets. 5 Knot Passing Pulleys. 1 Fork or 3 Slings. 6 Floor Hooks. 110 feet ¾ inch Manila Rope. 50 feet ⅜-inch Check Rope. 40 feet ⅜-inch Reverse Rope.

For a 50 Foot Barn.—One Hay Unloader. 48 feet Steel Track. 25 Hanging Hooks. 25 Rafter Brackets. 5 Knot Passing Pulleys. 1 Fork or 3 Slings. 6 Floor Hooks. 130 feet ¾-inch Manila Rope. 55 feet ⅜-inch Check Rope. 50 feet ⅜-inch Reverse Rope.

For a 60 Foot Barn.—One Hay Unloader. 54 feet Steel Track. 28 Hanging Hooks. 28 Rafter Brackets. 5 Knot Passing Pulleys. 1 Fork or 3 Slings. 6 Floor Hooks. 160 feet ¾-inch Manila Rope. 60 feet ⅜-inch Check Rope. 60 feet ⅜-inch Reverse Rope.

For a 70 Foot Barn.—Hay Unloader. 66 feet of Track. 34 Hanging Hooks. 3½ lbs. Bracket Nails. 5 Pulleys. 1 Fork or 3 Slings. 6 Floor Hooks. 190 feet ¾-inch Draft Rope. 70 feet ⅜-inch Check Rope. 70 feet ⅜-inch Reverse Rope.

For an 80 Foot Barn.—Hay Unloader. 78 feet of Track. 40 Hanging Hooks. 40 Rafter Brackets. 4 lbs. Bracket Nails. 5 Pulleys. 1 Fork or 3 Slings. 6 Floor Hooks. 210 feet ¾-inch Draft Rope. 80 feet ⅜-inch Check Rope. 80 feet ⅜-inch Reverse Rope.

Different lengths of barns will use track, hanging hooks and rope in same ratio as above.

If required to take hay in at end of barn and have rope pass down at far end to horse, same amount of draft rope. If draft rope be returned to same end of barn and then down, this requires about one-fourth more draft rope.

Star Barn Equipment

The Dealers' Line

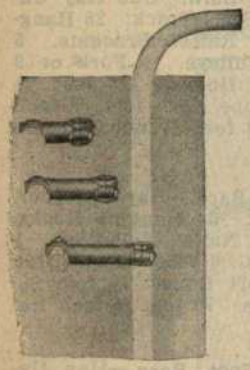
Star Barn Equipment is so standardized that any dealer can carry a small stock which will supply almost any demand. The Stall Arches. Stanchions, etc., are built to be uniformly interchangeable so that equipment to fit the needs of any farmer can be supplied.

Farmers Are Building Modern Barns

To be modern a barn must be equipped with Steel Stalls, Stanchions, Litter Carriers, etc. The wide-awake dealer will take advantage of this opportunity for profit.

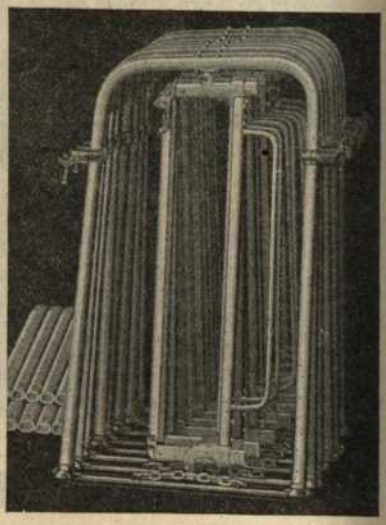
Dairying is an Evidence of Progress

Any community which develops dairying is bound to be prosperous. This has been proven in all sections of the country. Star Barn Euipment makes dairying more profitable. It is to the dealer's interest to sell as many outfits of Star Equipment as possible.



Stall Arches of Standard Size

The Stall Arches are of standard size and design,—all alike. The same size arch is used whether the stalls are to be 3, 3¼, 3⅓ or 3½ feet wide. The different widths of stalls are made by using "arms" of different lengths as shown in the cut at the left. The arm for 3½ ft. stall is attached to the side stall arch. The shorter arms are used for narrower stalls.



Built at the Factory—Not in the Barn

ASSEMBLED BEFORE SHIPPING—Unit System of construction permits stall to be built at the factory. They are assembled before being shipped. Experienced men at the factory carefully fit the parts and bolt them in place. This saves much of the cost of installing.

CUTS OUT WORK AND EXPENSE—The expense of installing, a part of the cost of any equipment, is nearly eliminated by assembling Star Stalls before they are shipped.

NO CHANCE FOR LOSS AND DELAY—The railroad is robbed of a chance to lose any of the parts. This avoids possible delay or annoyance. When a thing comes assembled you know it's all there. The cut above shows just how Star Stalls come from the factory.

Dealers' Helps

BLUE PRINTS FURNISHED FREE—If you will send us a rough sketch of the ground floor plan of the barn to be built by any of your customers, the factory architectural department will draw up a blue print of the floor plan which will show the best possible arrangement of the barn equipment. This service is absolutely free and will help you a great deal in landing Barn Equipment orders.

BARN PLANS—We have accumulated plans of some of the most practical barns in the country. These are printed in the general catalog of Star Equipment which will be sent to any dealer on request.

VENTILATION—The general catalog of Star Equipment also contains full information regarding ventilating systems.

ASK FOR SPECIAL BARN EQUIPMENT CATALOG, GIVING FULL INFORMATION ON HOW TO BUILD, ETC.

Why Dairymen Prefer Star Steel Stalls

Many Styles—One Quality

BEST MATERIAL USED—Only the best grade of tough high carbon steel pipe is used. No "scratch pipe" or second-hand boiler flues.

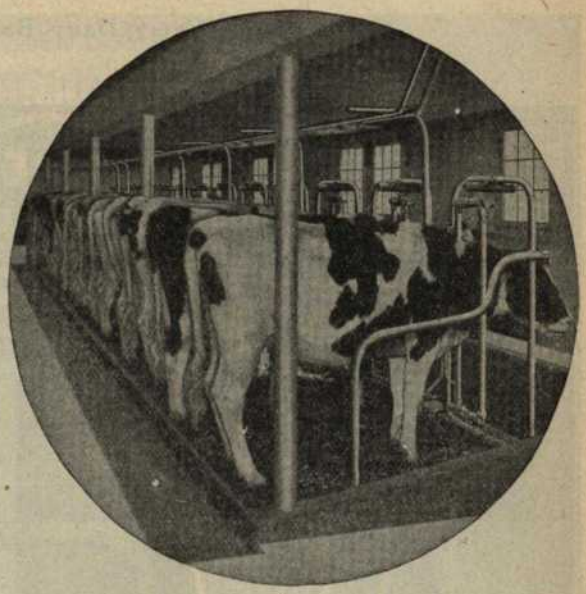
EVERY PIECE TESTED—Every piece of tubing in Star Stalls passes through a special bending process. Only the toughest steel can be bent by this process. Any other quality breaks.

NO CLAMP IRONS USED—Star Stall Frames are of one piece of tubing, which does away with clamp irons.

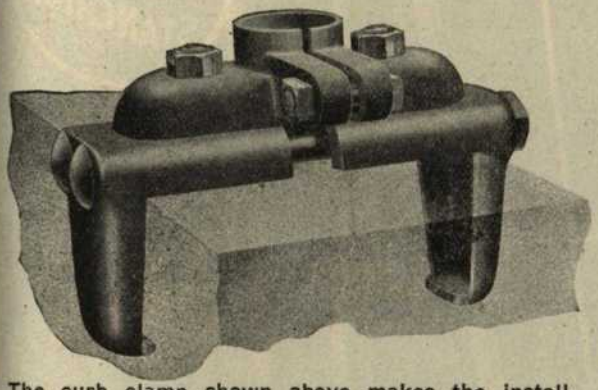
NO DUST CATCHERS—Star Stall Arches being free of clamp irons, are smooth along the top, with no corners for dust to settle in. They are easily cleaned and kept clean.

FEWEST POSSIBLE PARTS—One big advantage of Star Stalls is that they are made up of the fewest possible number of parts.

STRONGEST POSSIBLE CONSTRUCTION—Fewest parts, best materials and four points attached to concrete gives STAR STALLS strength and durability which have never been excelled.



Star Curb Clamp



The curb clamp shown above makes the installing of Sanitary Equipment an easy task.

Star Curb Clamps, as illustrated, greatly simplifies the installation of Star Stalls.

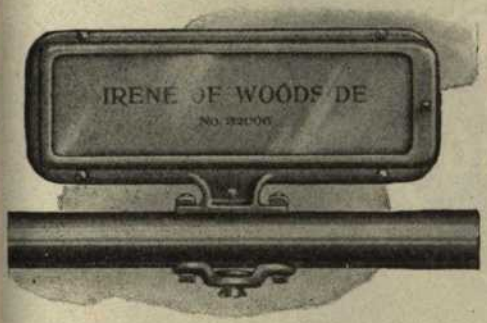
Sixty Seconds Sets a Stall

When fitted with Curb Clamps, the installation of Star Stalls is as simple as setting up a bed. None of the equipment needs to be on hand when the cement work is being done.

The use of anchors and spacers is entirely eliminated. The concrete floor can be built without fixtures, anchors, templates or anything of that kind to bother with, and there is nothing to do in setting up the front of the stall except to drop the clamps over the curb and tighten them up. The jaws of this clamp are adjustable to the curb by means of long bolts. The best size for the curb is 6 inches high and 6 inches wide, but this can vary considerably if necessary.

Curb Clamps only.....Per pair. .90

Name Plates



This attachment can be used either as a name plate or as a holder for record cards, etc. Can be attached to any Star Stall.

Furnished complete with celluloid facing.

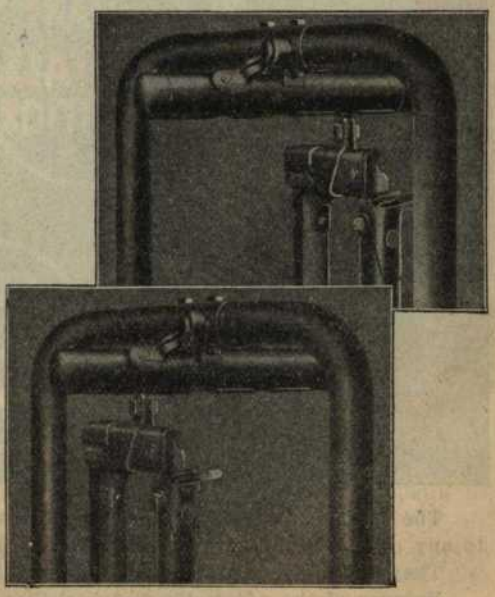
Name Plates.....Each, 1.20

Star Alignment Device

All cows are not the same length, but this alignment device makes it possible to keep both the short and long cows lined up perfectly at the gutter, as shown in illustration at the right.

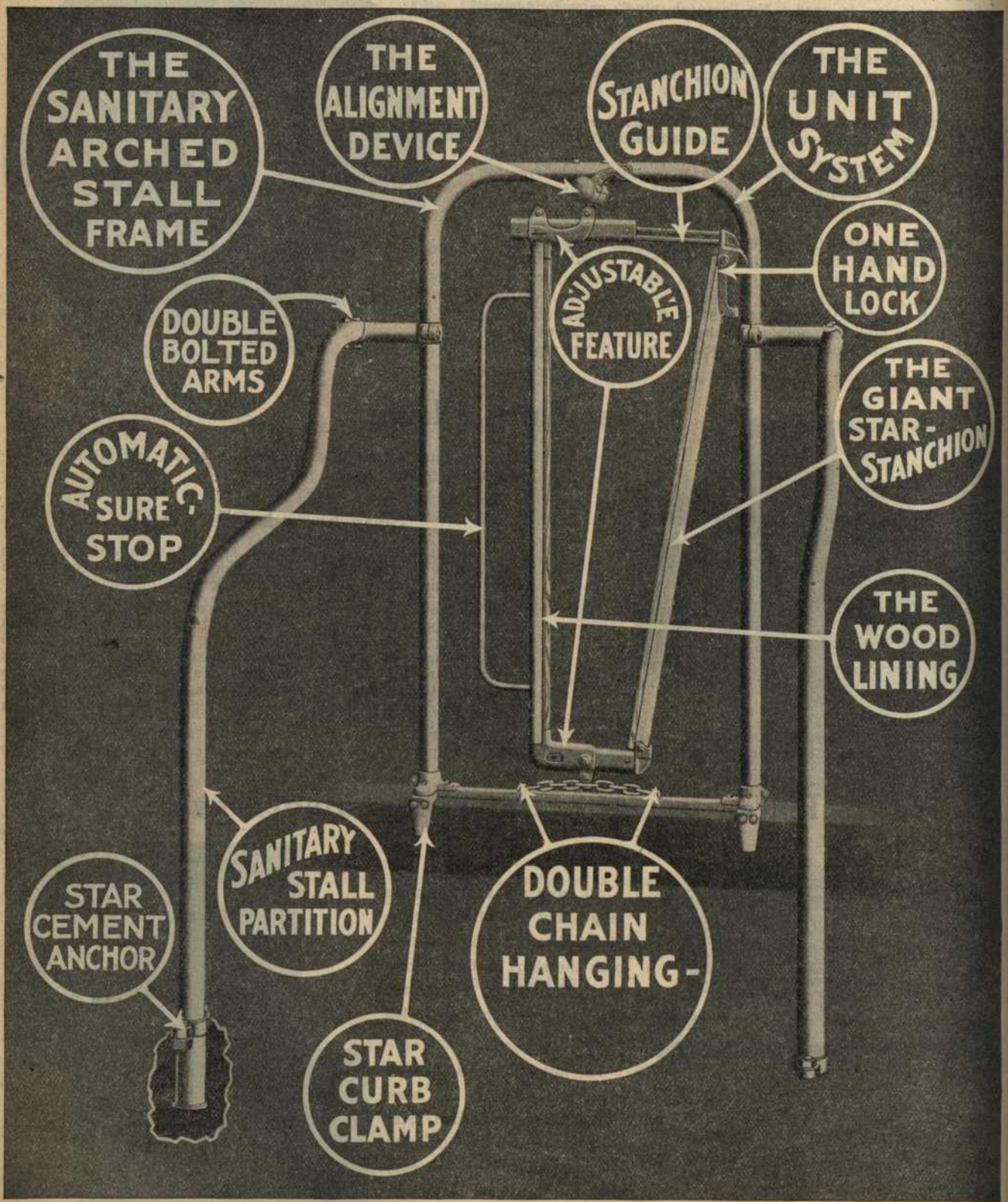
The adjustment is made as easily as locking the stanchion. No tools needed. Simply lift the small lever, move the stanchion to desired position and it is held rigidly.

Alignment Device..Each, 1.20



Exclusive Star Features

Every Dairy Barn Should Be "Star Equipped"

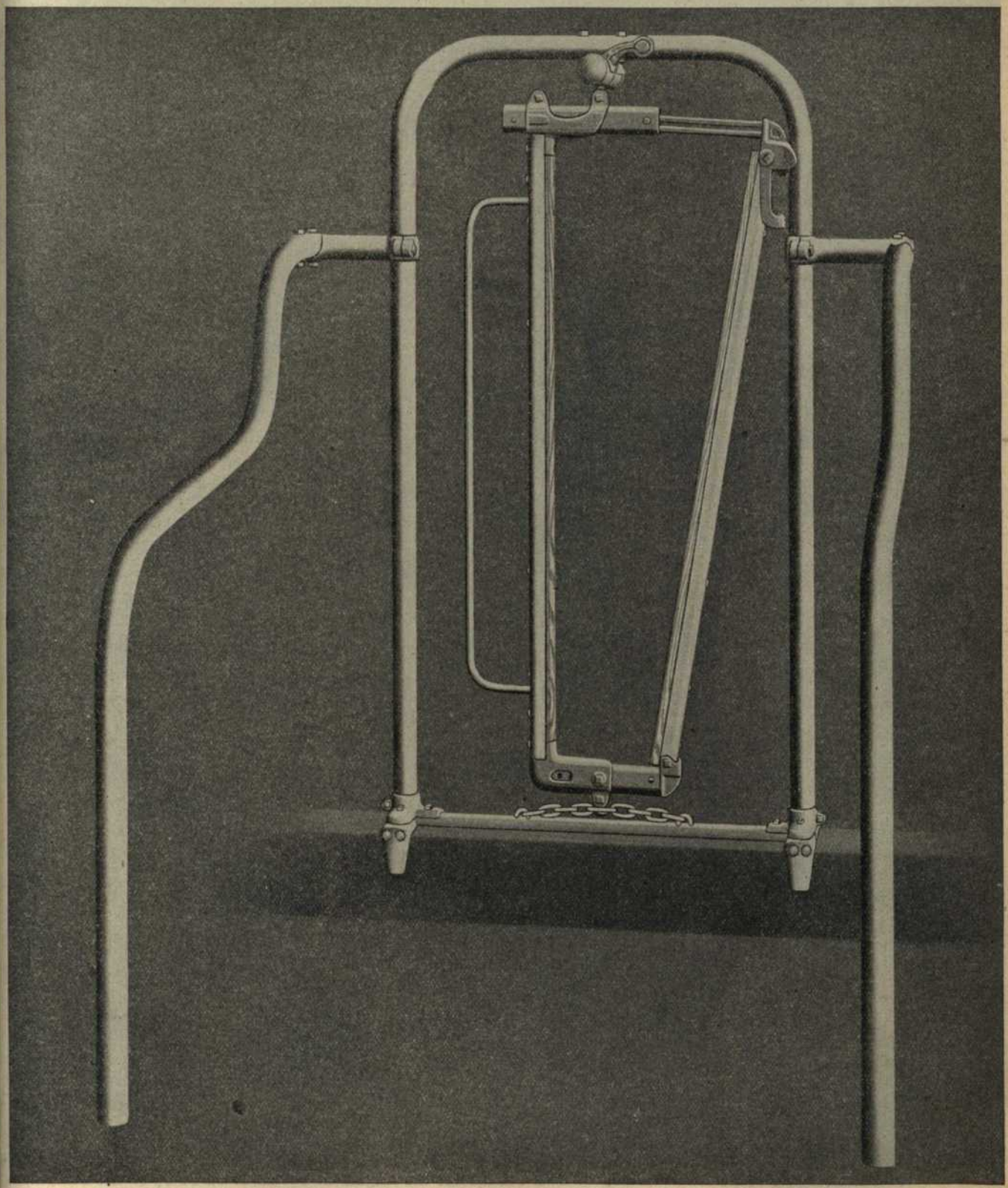


The features pointed out in the above illustration mean that in Star Equipment we furnish Stalls that are adaptable to any condition and give practical service in every respect.

They require a minimum cost to install, and save much time and labor in care of cows.

Because of the adjustable features, Star Stalls always fit the herd.

No. 10 Star Steel Stall



Arch and Partition made of 1⅝ in. O. D. high grade pipe. Arches are all same size, but different length side arms are provided to furnish stalls 3 ft. 3 in., 3 ft. 4 in., or 3 ft. 6 in. wide. No. 10 Star Stall includes Stall Arch, Adjustable Giant Star Stanchion with Sure-stop, Curb Clamps and Alignment Device (for detailed description see other pages). Each Stall includes one partition. Partition for end of row furnished at slight extra cost. Finished in baked gray enamel.

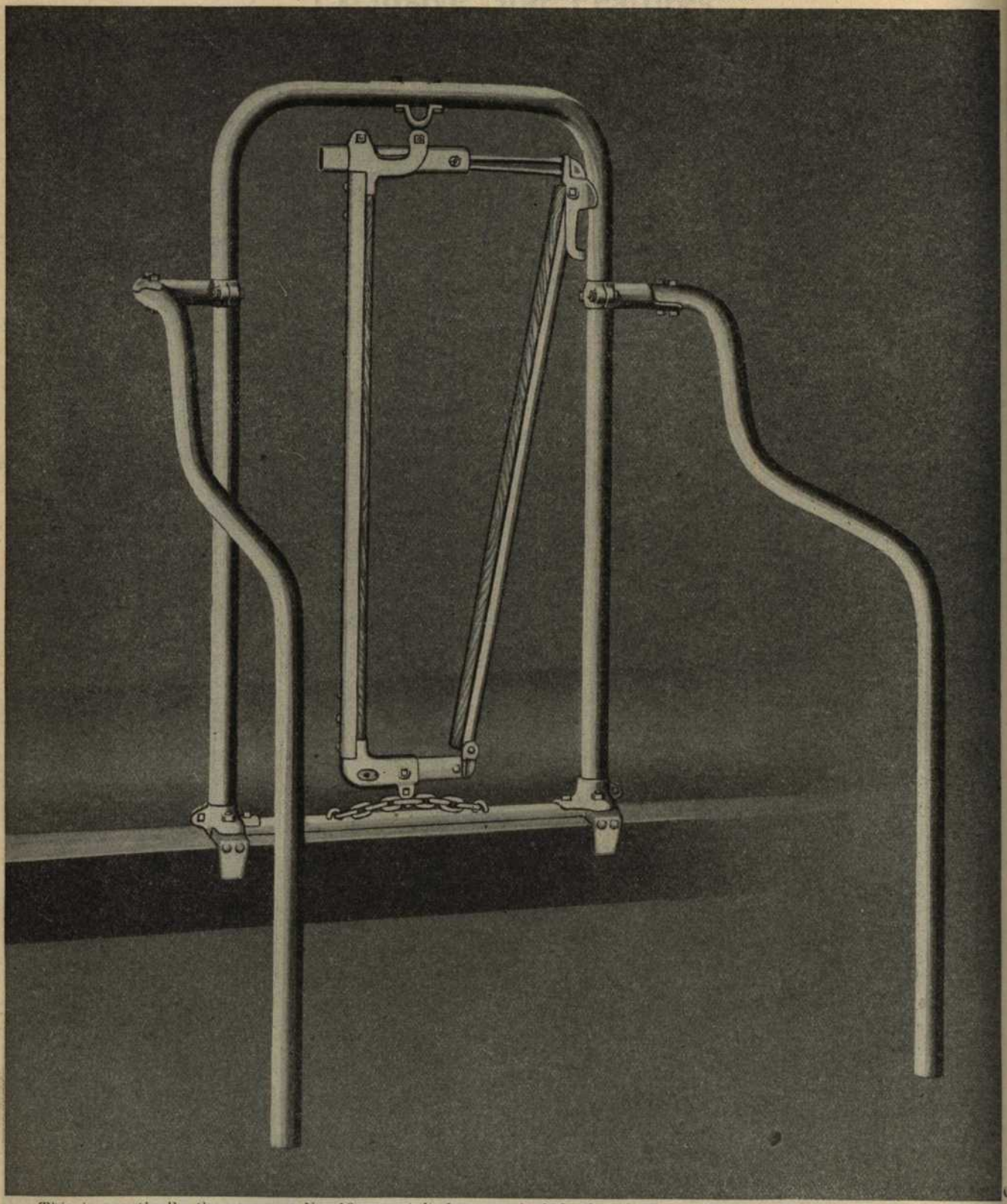
Be sure to specify width of Stall wanted.

No. 10—Star Steel Stall. Approx. Weight, each, 80 lbs.....Each. 15.60
Extra Stall Partitions. Approx. Weight, each, 13½ lbs.....Each, 2.40

For Manger Partitions, Water Bowls or Name Plates see other pages.

No. 12 Star Steel Stall

Furnished also with other Stanchions and Attachments.



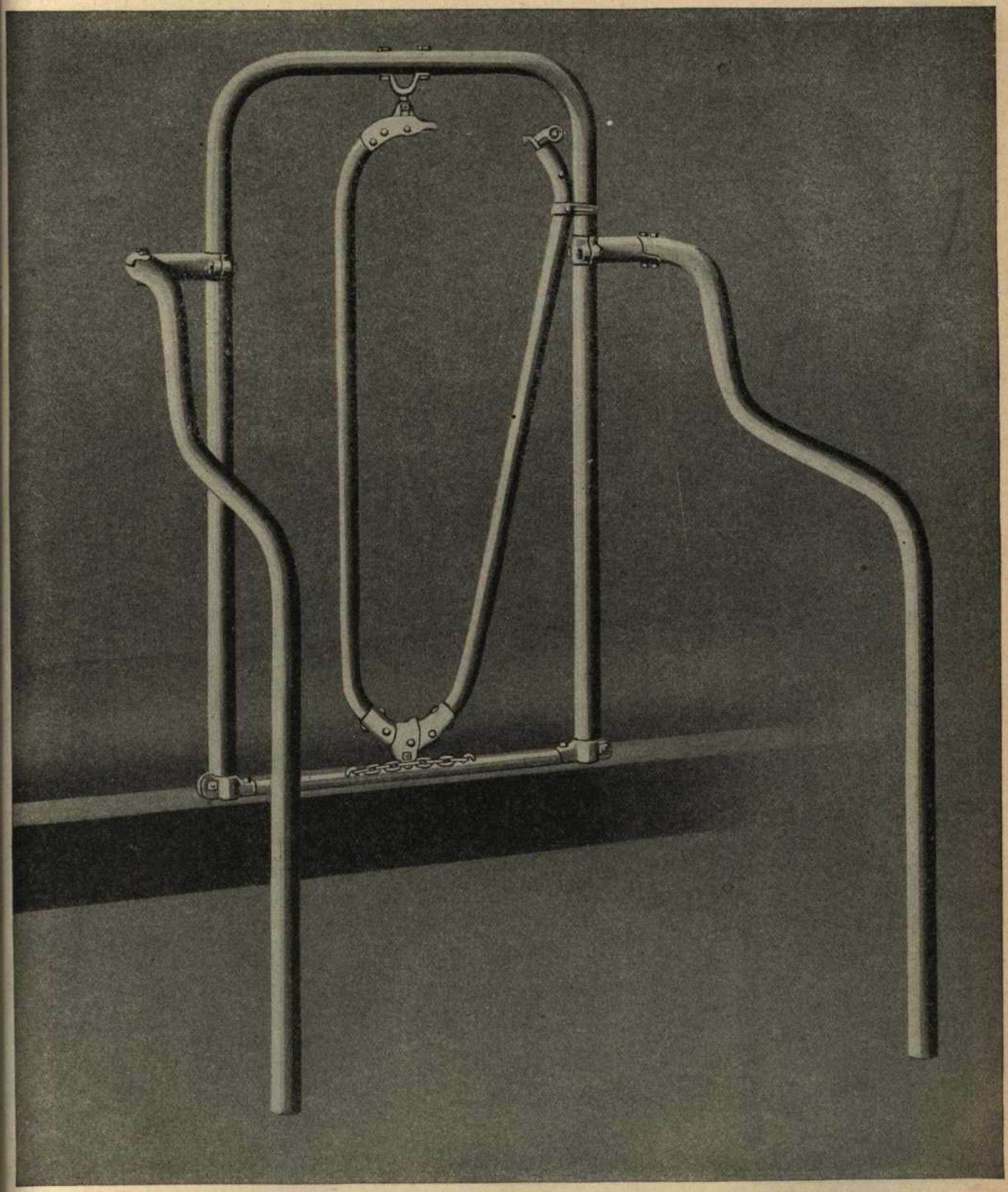
This is practically the same as No. 10 except it does not include the Alignment Device or Sure-stop on the Stanchion. This Stall can be equipped with any of the other stanchions listed on the following pages at a reduction in price equal to the difference in price of the stanchions. It can be equipped with Sure-stop, Alignment Device, Name Plate or any other Star device at the additional price of the article itself. For easy figuring to determine price on different combinations we list the component parts of this Stall separately. Finished in baked gray enamel.

Be sure to specify width of Stall wanted. See page 591.

Stall Arch with Curb Clamps, Side Arms and Bottom Bar with Chain	5.70
Giant Stanchion without Sure Stop	5.70
Stall Partition	2.40
No. 12—Star Stall, including three items listed above. Approx. weight 85½ lbs	13.80

For Manger Partitions, Water Bowls or Name Plates, see other pages.

No. 16 Star Steel Stall



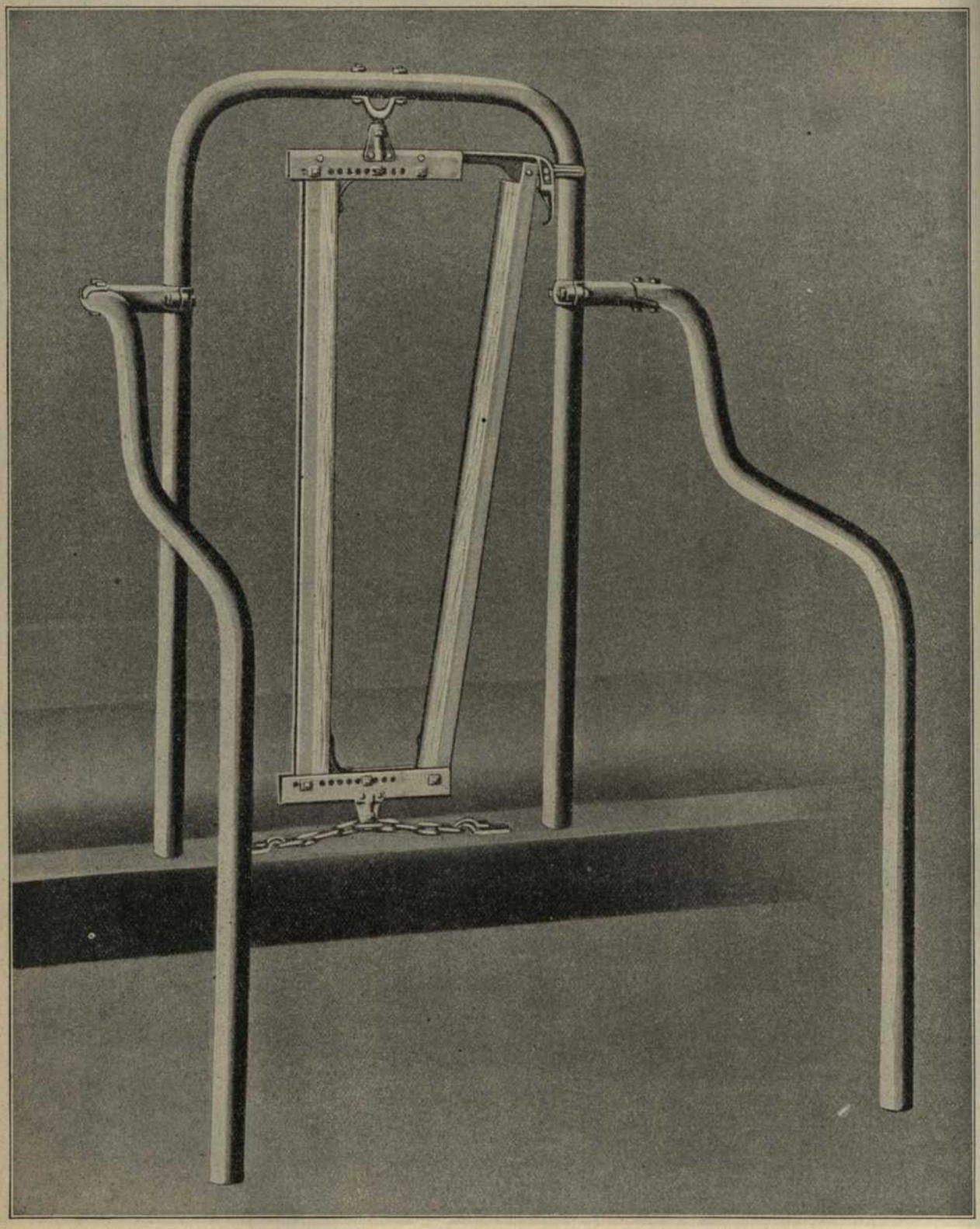
This Stall is built on the unit system and of same material as No. 10, but in place of using Curb clamps the lower ends of the Stall arch extend into the cement. If wanted with Curb Clamps refer to No. 12 on page 592. It is equipped with No. 999 Tubular Stanchion, which is minutely described on page 600. Very substantial and even without the curb clamps and alignment device makes a very satisfactory equipment where low price is the governing factor. Can also be equipped with other Star Stanchions at a slight increase in price equal to the difference in price of the Stanchions. Finished in baked gray enamel.

Be sure to specify width of Stall wanted. See page 591.

No. 16—Star Steel Stall. Approx. weight each, 62 lbs.....Each, 12.30
Extra Stall Partition. Approx. weight, 13½ lbs.....Each, 2.40

For Manger Partitions, Water Bowls or Name Plates, see other pages.

No. 1127DC Junior Star Steel Stall



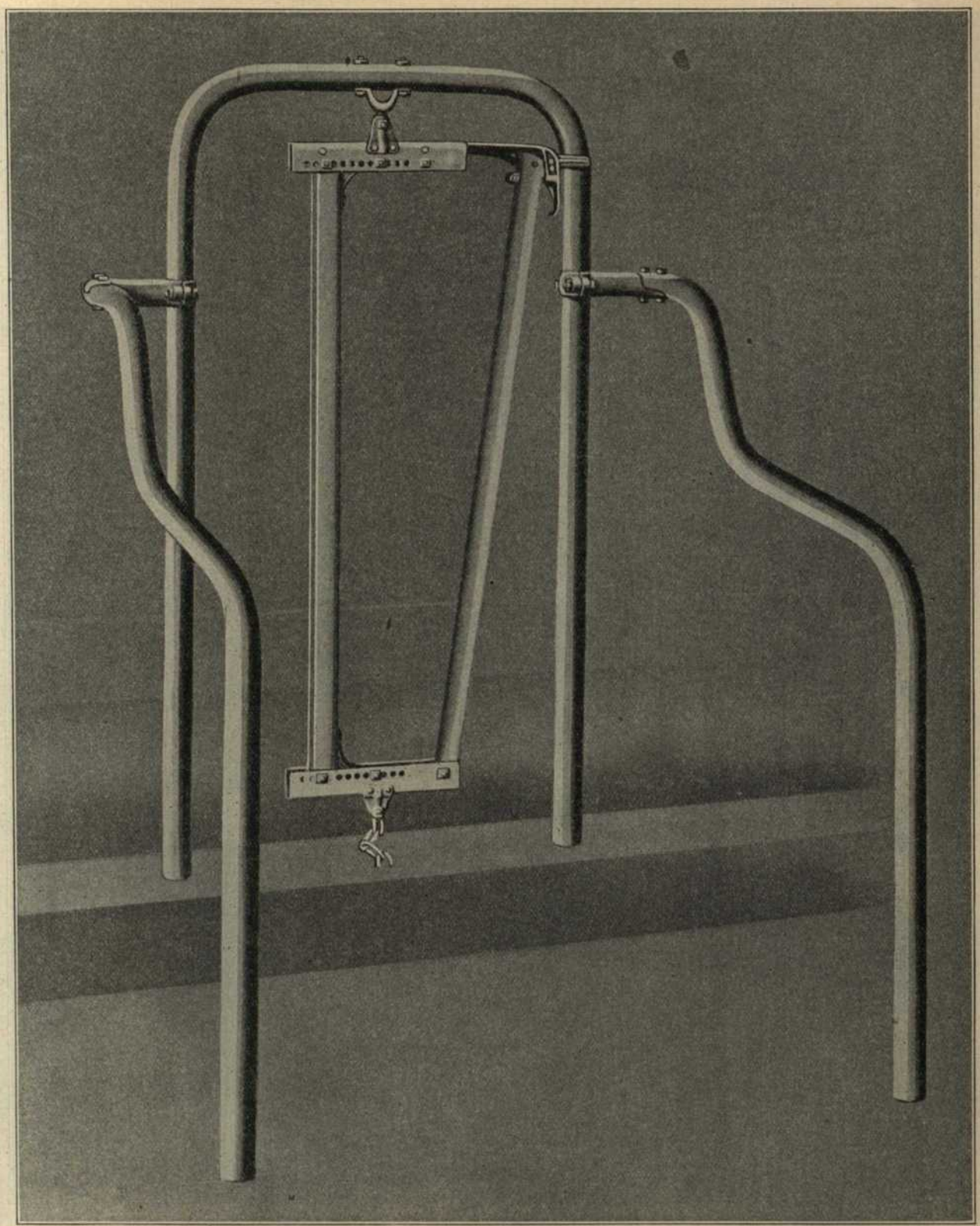
Arch and Partition made of 1⅝-in. O. D. high grade pipe. Arches are all same size, but different length side arms are provided to furnish stall 3 ft., 3 ft. 3 in., 3 ft. 4 in or 3 ft. 6 in. wide. No. 1127DC Stall includes Stall Arch and No. 1114W Junior Adjustable wood lined Stanchion (for detailed description see other pages) Each Stall includes one partition. Partition for end of row furnished at slight extra cost. Also furnished as plain No. 1127 with single chain at bottom of stanchion at slightly lower price. Finished in baked gray enamel.

Be sure to specify width of Stall wanted.

No. 1127DC—With Double Chain on Stanchion	Each, 10.20
No. 1127 —With Single Chain on Stanchion	Each, 9.60
Extra Stall Partitions	Each, 2.40

For Manger Partitions, Water Bowls or Name Plate, see other pages.

No. 1122 Junior Star Steel Stall



Arch and Partition made of 1⅝ in. O. D. high grade pipe. Arches are all same size, but different length side arms are provided to furnish stalls 3 ft., 3 ft. 3 in.. 3 ft. 4 in. or 3 ft. 6 in. wide. No. 1122 Stall includes Stall Arch and No. 1114 Junior Giant Stanchion (for detailed description see other pages). Each Stall includes one Partition. Partition for end of row furnished at slight extra cost. Also furnished with Double Chain Bottom at slight additional cost. Finished in baked gray enamel.

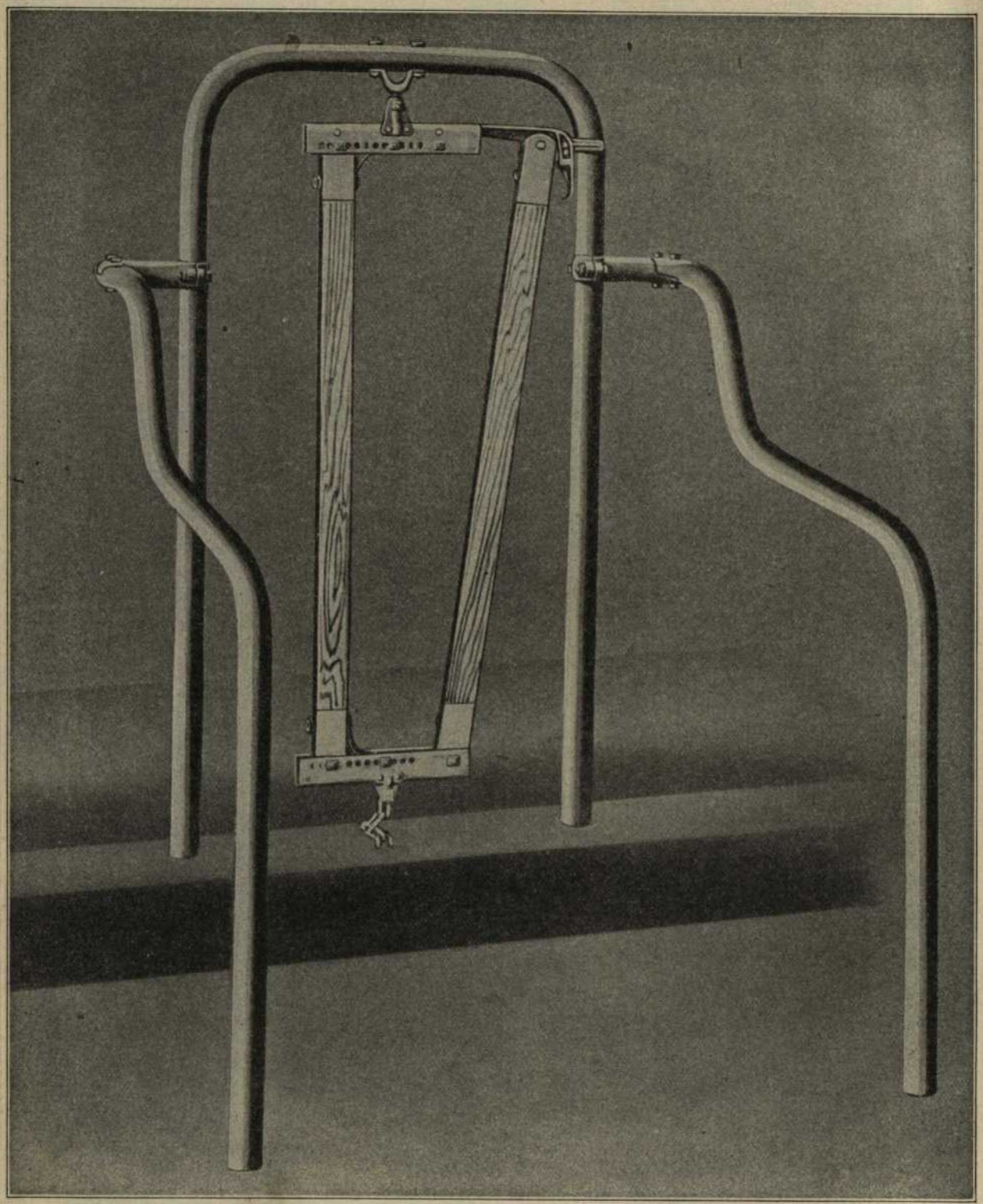
Be sure to specify width of Stall wanted.

No. 1122 —With Single Chain on Stanchion.....Each, 9.45

No. 1122DC—With Double Chain on Stanchion.....Each, 10.05

For Manger Partitions, Water Bowls or Name Plates, see other pages.

No. 1121 Junior Star Steel Stall

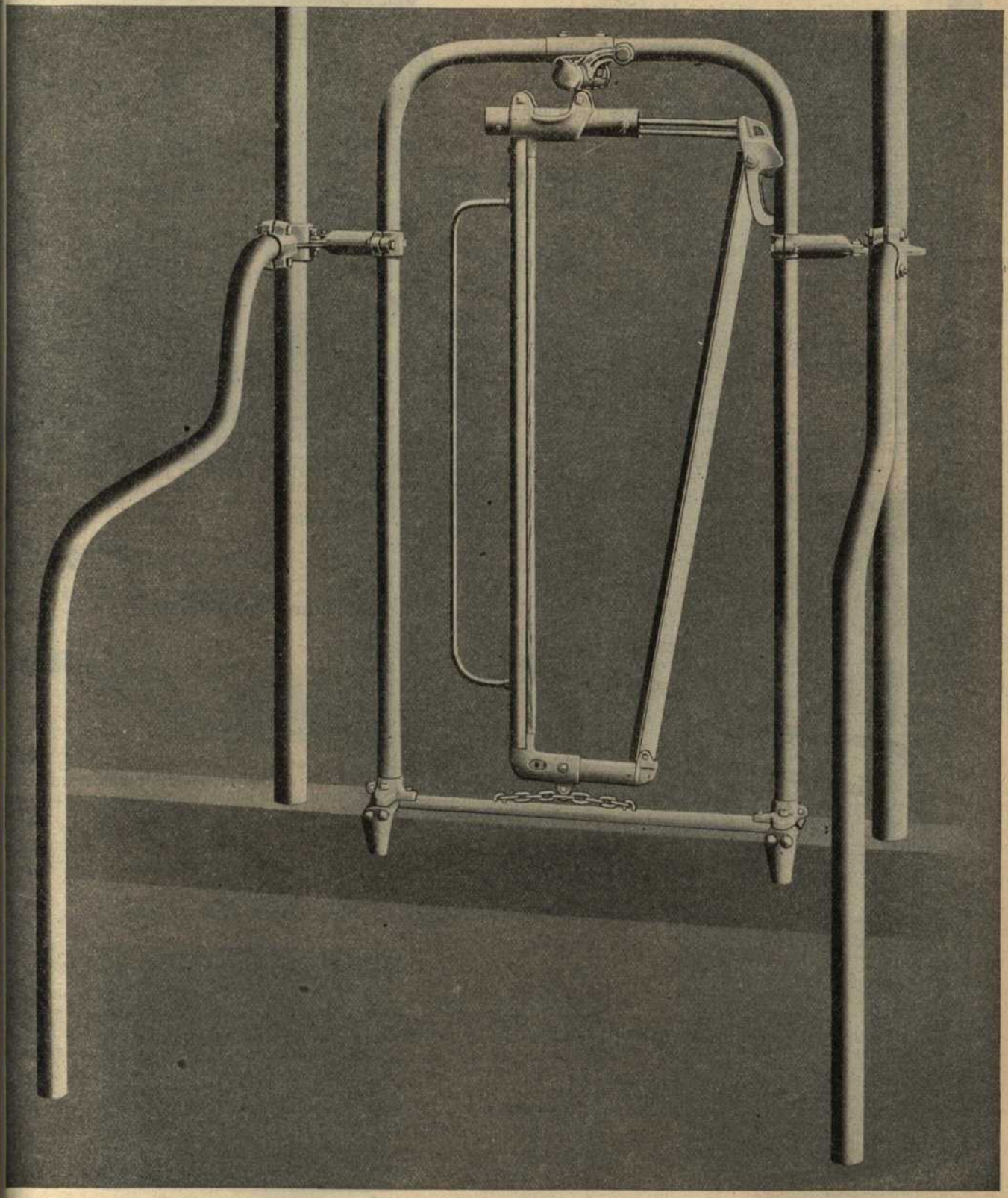


Arch and Partition made of 1⅝ in. O. D. high grade pipe. Arches are all the same size, but different length side arms are provided to furnish stall 3 ft., 3 ft. 3 in., 3 ft. 4 in. or 3 ft. 6 in. wide. No. 1121 Stall includes Stall Arch and No. 452 Adjustable Stanchion (for detailed description see other pages). Each Stall includes one Partition. Partition for end of row furnished at slight extra cost. Also furnished with Double Chain Bottom at slight additional cost. Finished in baked gray enamel.

Be sure to specify width of Stall wanted.

No. 1121 —With Single Chain on Stanchion.....Each, 9.30
No. 1121DC—With Double Chain on Stanchion.....Each, 9.90
For Manger Partitions, Water Bowls or Name Plates, see other pages.

No. 20 Star Steel Stall



This Stall is practically the same as No. 10, except the side arms are equipped with castings for attaching to upright steel posts between each two stalls. Posts are not included, but we can furnish extra, as indicated on other pages. This Stall can also be equipped with other Stanchions or attachments, the same as No. 12, at a difference in price equal to the difference in price of the Stanchions or attachments separately. Finished in baked gray enamel.

Ee sure to specify width of Stall wanted. **See page 591.**

No. 20—Star Steel Stall.....Each, 16.80
Extra Stall Partition.....Each, 2.40

For Manger Partitions, Water Bowls or Name Plates, see other pages.

Steel Posts

From Factory Only, Harvard, Ill.

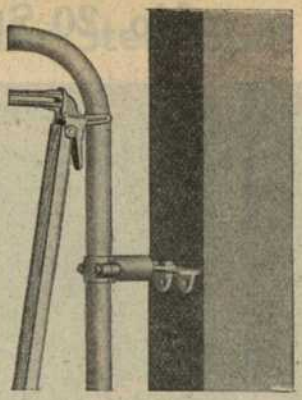
These Posts are used in connection with the No. 20 Stalls. Can also be used as regular supporting columns any place in the barn. Factory carries these Posts in stock cut in lengths of 7, 7½, 8 and 8½ ft. Other lengths cut to special order at a slight additional cost. The prices shown below are for the Steel Posts complete with caps and bases.

Be sure to state length of Post wanted.

POSTS

Outside Diam., ins.	Safe Load	Weight Per ft.	7 ft.	7½ ft.
2⅜	3½ tons	3½ lbs.	4.80	5.10
3	4¾ tons	3½ lbs.	7.05	7.50
4	8¾ tons	5½ lbs.	8.70	9.30
5	13 tons	7½ lbs.	11.70	12.30

Outside Diam., ins.	Safe Load	Weight Per ft.	8 ft.	8½ ft.
2⅜	3½ tons	3½ lbs.	5.40	5.70
3	4¾ tons	3½ lbs.	7.95	8.40
4	8¾ tons	5½ lbs.	9.90	10.50
5	13 tons	7½ lbs.	12.90	13.50



Wooden Post Bracket

This is a malleable bracket which fastens to a wooden post in the stall row, or to wall at end of row for attaching stalls. When furnishing these Brackets on an outfit we furnish the necessary number of special stall arms for attaching to these Brackets in place of the regular partition arms.

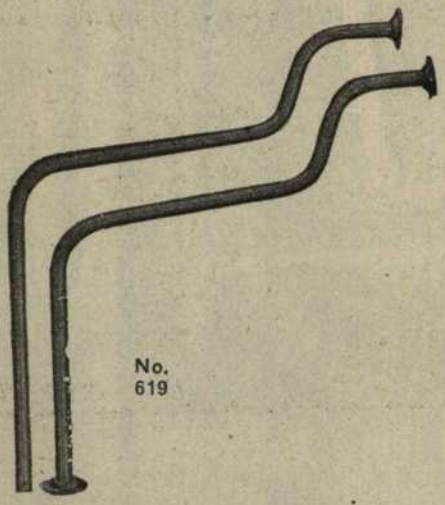
No. 625.....Each, .60

Adjustable Stall Arms

We can furnish these Stall Arms in any length. Especially designed for odd widths of stalls. In ordering we must know exact distance apart, center to center, of the partitions to which they attach. Cut shows No. 623. No. 624 is exactly the same except is used with No. 20 stalls, while No. 623 is used with Nos. 10, 12 or 16 stalls.

No. 623.....Each, 1.20
No. 624.....Each, 1.20

Stall Partitions



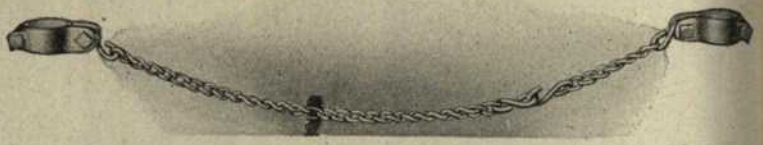
No. 618 No. 619

In addition to the regular Partitions furnished with Star Stalls, we have special Partitions as shown above.

No. 618 is intended for use against a wooden post and extending into a cement floor. No. 619 is for use with a wooden post and also a wooden floor. Weight each 14 lbs.

No. 618.....Each, 2.40
No. 619.....Each, 2.70

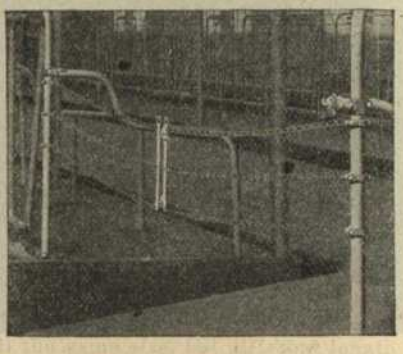
Star Neck Chains



These chains are used to keep the cows from lying down. Very good for dairies producing certified milk, for cow cannot lie down after udder is washed, until milked. Clamps to sides of Stall Arch at the desired height. When chains are unhooked they hang down out of the way.

No. 758.....Each, 1.20

Star Chain Alley Gate



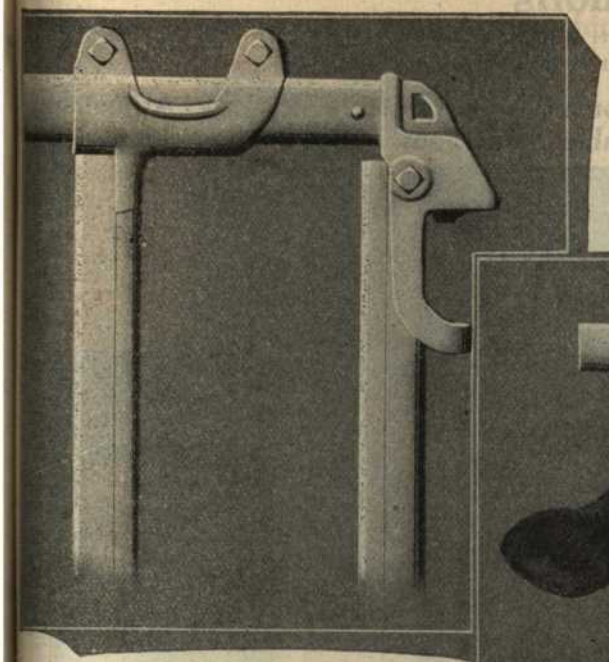
A very simple but practical way of closing an alleyway. Gate is made in two sections and when not in use hangs on the partition, post or wall on either side. Fits any opening up to 6 ft. wide. For narrow openings simply cut off part of the chain. Gates to be used in wider openings can be furnished on special order at a slight additional cost. Furnished complete with clamps ready to attach.

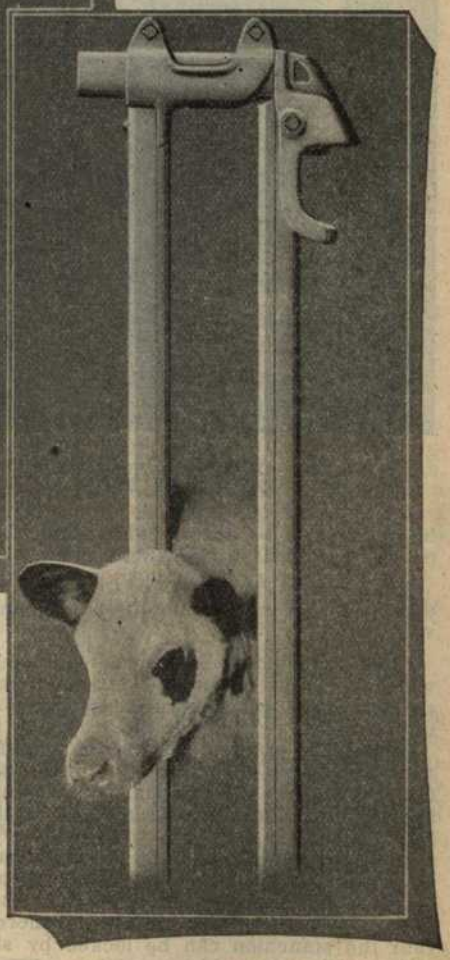
No. 739.....Each, 5.40

Star Split Flange

These flanges can be used for attaching to temporary wooden floor a partition to be later used in cement.

No. 719.....Each, .75





Exclusive Star Feature

Star Stanchions are Adjustable

Fit Largest Bull or Smallest Calf

The Giant Stanchion easily adjusts in neck width from 5 to 9½ inches. Just by loosening two counter-sunk set screws this adjustment can be accomplished. The same stanchion can be used to accommodate a young heifer, or even a calf, and then adjusted to fit the heaviest cow or bull.

This adjustable feature has advantages which mean the saving of time and labor and the economy of room in the barn.

In the first place, by having the stanchions adjustable, it is not necessary to purchase special equipment for young stock. Moreover, even if put to the extra expense of having special equipment for young stock, the farmer cannot tell when buying equipment how his herd will be divided as to young and old stock next year.

As long as the stanchions can be adjusted without taking them out of the stall frame, it is possible to keep his barn properly equipped all the time, and no matter how the herd changes, the stanchions fit.

The dealer should emphasize these points with the prospect.

BUILDING INFORMATION.

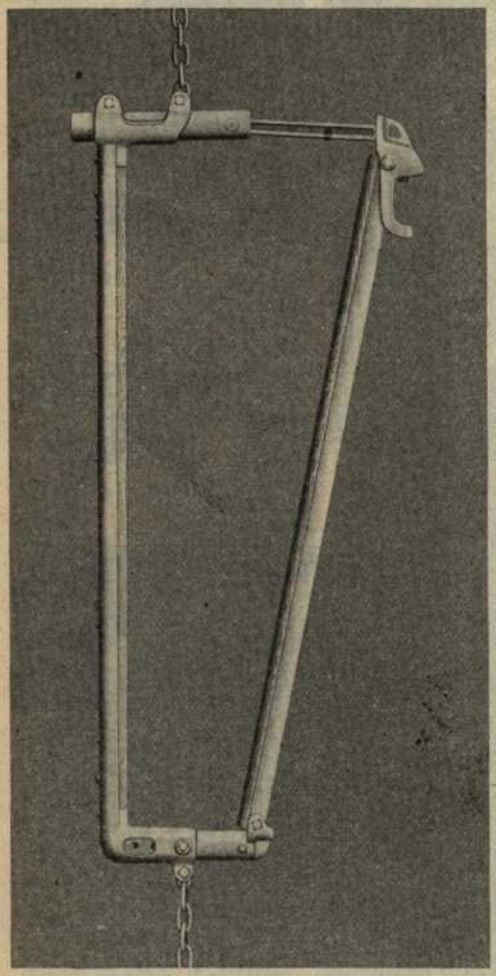
The special Barn Equipment Catalogs, which we furnish on request, contain a great deal of practical information on "How to Build," the proper installation of Ventilating Systems, Water Bowls, Cork or Wood Block Floors, Arrangement of Floors, Windows, Pens, Litter and Feed Carriers, etc. They are valuable books for the dealer or farmer.

Star Stanchions

FOR USE SEPARATELY OR WITH STEEL STALLS

Any of these Stanchions can be used with any Star Stall.

Giant Adjustable Stanchions



No. 486. GIANT STANCHION WITHOUT SURE STOP.

The Giant Stanchion is by actual test one-third stronger than any other stanchion on the market. It is easy to open and close; has a safe and sure lock.

The uprights are of tough high carbon U-bar steel with the throat side turned in. These bars are fitted with a hard maple lining. The lining is kiln dried before it is cut and is forced into the U-bar completely filling it. Besides being held in place by the sides of the U-bar, the wood lining is further secured by three screws inserted an inch and a quarter into the wood.

The Giant Stanchion is adjustable in neck width from 5 to 9 inches by loosening two set screws which hold the upper and lower cross bar. This adjustment is quickly and easily made.

This makes it possible to keep the barn properly equipped. No matter how the herd changes the stanchions will fit.

Giant Stanchions can also be equipped with a Sure Stop which is simply a bent rod, attached rigidly to the side of the Stanchion (see illustration on page 590). This prevents the cow from putting her head through the wrong place.

One of the greatest difficulties manufacturers have had to contend with is the hinge. No way has as yet been discovered to make a hinge that is strong enough to stand the heavy strain that is thrown upon it. In the Giant Stanchion this difficulty is overcome by providing the stanchion with a guide arm which connects the upper ends of the uprights and relieves the hinge of all strain upon it.

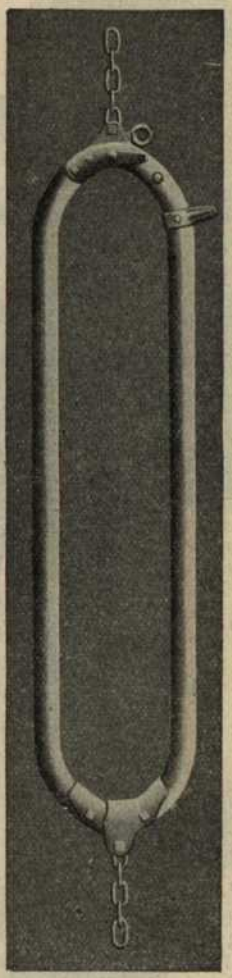
The guide has a further use:—It insures the register of the locking parts or to state it more plainly, it means that the stanchion can be locked by simply slamming it shut. The movable upright of the stanchion is provided with a crotch device which straddles the side of the stall frame, holding the stanchion in place and preventing it from swinging as the cow puts her head through. Finished in gray enamel. Weight 27 lbs.

No. 486—Giant Star Stanchion, with single chain, top and bottom.....Each, 5.70

No. 486X—Giant Star Stanchion, with swivel top and No. 629 double chain bottom.....Each, 6.60

For Sure Stop on either 486 or 486X, add..... .60

Tubular Non-Adjustable Stanchions



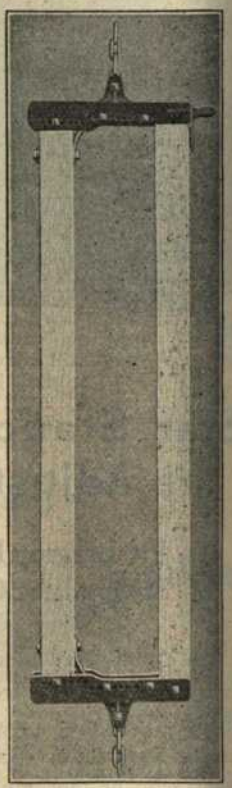
No. 999.

No. 999 is made of 1-inch seamless tubing, fitted with neat malleable attachments. The latch is cow-proof, but the stanchions can be easily opened with one hand. The hinge is designed so that it cannot open wider than necessary. Neck space is standard width. Finished in gray enamel. Weight, 17 lbs.

Furnished with 5 links of chain at top and bottom.

No. 999—With chain top and bottom.....Each, 4.50

Wooden Adjustable Stanchions

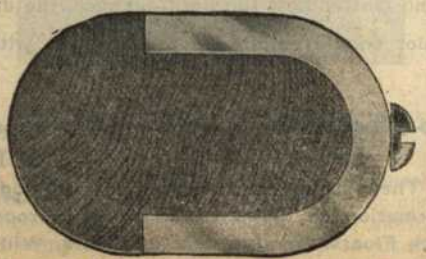


No. 452.

No. 452 Star Adjustable Wood Stanchion with uprights of selected hardwood and cross pieces of heavy iron. Adjustable in neck width from 4½ to 8½ inches. Fitted with cow-proof lock, guide arm and crotch casting for straddling frame when open. Iron parts black; wood natural finish. Weight, 15 lbs.

Furnished with 4 links of chain at top and bottom.

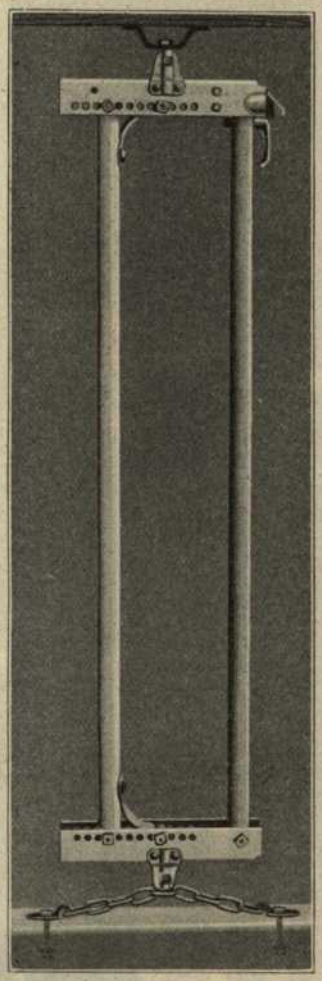
No. 452—With chain top and bottom.....Each, 2.60



This Illustrates How the Wood Lining Fits in the Giant Stanchion.

Star Stanchions, Continued

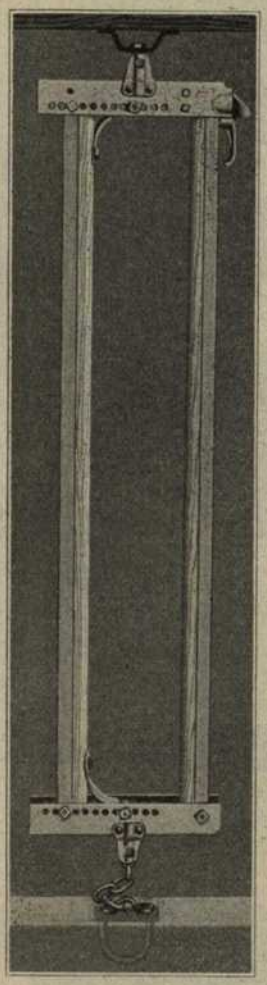
Junior Giant Adjustable Steel Stanchion



Uprights are heavy steel U bars with iron U top and bottom. Easily and quickly adjustable, 5 to 8 inches in neck width. Sliding guide removes all strain on hinge and insures perfect operation of lock. Latch is cow-proof but stanchions are easily opened with one hand. Furnished with single chain top and bottom unless otherwise specified. Can be furnished with swivel top and No. 629 double chain fastening as illustrated, at slight additional cost. Finished in gray enamel.

No. 1114.....Each, 3.75

Junior Giant Adjustable Wood Lined Stanchion



Exactly like the No. 1114 Junior Giant, except it also has a carefully fitted and firmly fastened hardwood lining. Easily and quickly adjustable, 5 to 8 inches in neck width. Latch is cow-proof, but stanchions are easily opened with one hand. Furnished single chain top and bottom unless otherwise specified. Can be furnished with swivel top and No. 629 double chain fastening as illustrated below, at slight additional cost. Finished in gray enamel.

No. 1114W.....Each, 3.90

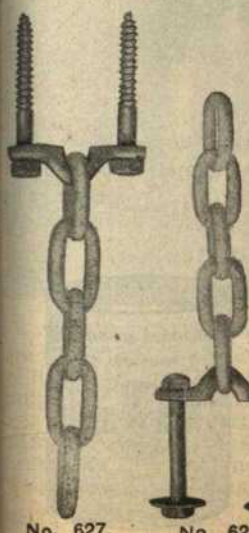
Stanchion Fastenings

Nos. 627 and 628 are for use with stanchions in wood frame stalls. No. 627 is for top and is equipped with ⅜x2½ lag screws. No. 628 is for bottom and is equipped with ⅜x3¼ machine bolts.

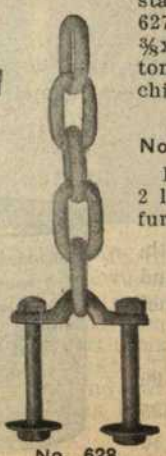
Chains not included.

No. 627-628.....Per set, .45

Price includes the two malleables, 2 lag screws and 2 bolts. Chains are furnished with stanchions.



No. 627.



No. 628.

This cut shows the swivel for top and double chain for bottom for use with Star Stanchions in place of the short single chain top and bottom with which stanchions are regularly equipped.

No. 629—When furnished separately without stanchion or stall.....Per set, 1.05

No. 629.

Star Manger or Gutter Drain

Used as an outlet for the water after barn has been flushed. Body is cast iron. The cap of aluminum is machined to make a close-fitting joint. 4 inches in diameter. Weight, 6 lbs.

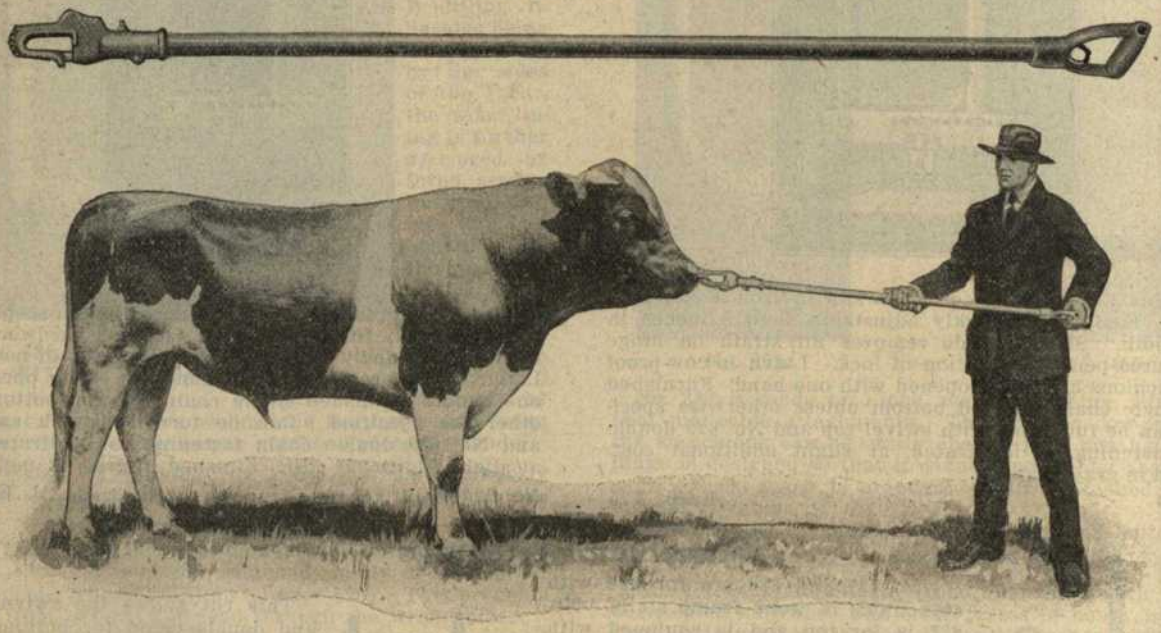
No. 637.....Each, 2.70

Star Sanitary Milk Stool

A very handy article. Strong and durable. Seat is wood, reinforced around the edges with an electrically welded steel rim which prevents warping. This makes a very comfortable stool and one that is sanitary and easily kept clean. Finished in gray enamel. Weight 6 lbs.

No. 725.....Each, 2.10

Star Steel Bull Staff



The best protection against accidents when handling the bull. This staff can be operated either from the handle or close to the hook end. Hook and handle are malleable and staff is 1 inch steel tubing. Finished in gray enamel. Wgt., 10 lbs.

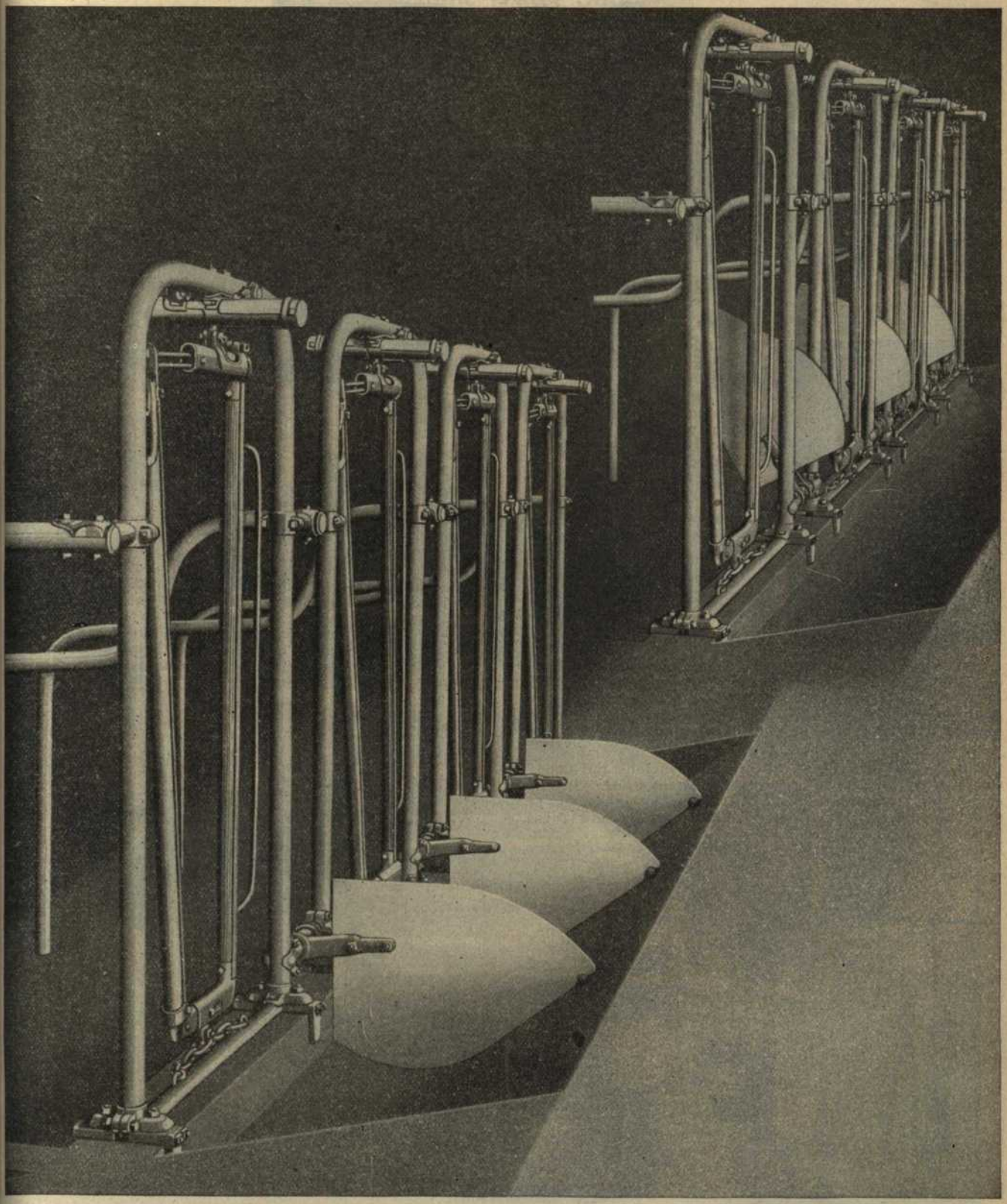
No. 724.....Each, 4.80

Gray Enamel

Star Equipment is finished with a high grade gray enamel. It is rust-resisting and withstands the ammonia and gases of dairy barns. It is elastic enough to allow the expansion and contraction of the steel without cracking or chipping. We can furnish extra cans of this enamel for retouching scratched or marred places. Weight per gallon, 12 lbs.

1-Pint cans.....Each, .90
1-Quart cans.....Each, 1.35
1-Gallon cans.....Each, 4.40

Star Steel Manger Partitions

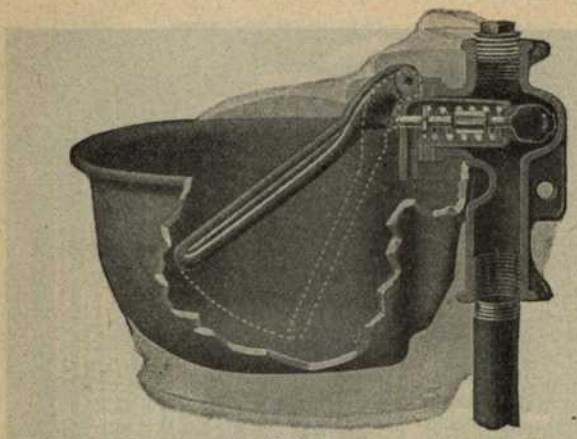


The Steel Manger Partitions accomplish the same result as individual feed boxes. Where these Manger Partitions are to be used, we can furnish a wooden templet of the proper shape to be used as a trowel in smoothing out the manger, or it can be used as a pattern from which to make solid forms. We make no charge for this wooden templet on orders calling for Manger Partitions.

These manger partitions are made of one piece of solid heavy steel and can be raised up out of the way when the manger is being cleaned. They are so arranged that when raised they will stay up without being held. Each partition is entirely separate and can be used either with or without steel stalls. Fastened to curb with clamp same as stalls. Weight each, including the fittings, 14 lbs. Finished in baked gray enamel.

No. 515 ..... Each, 3.30

Star Sanitary Water Bowls



No. 850 for Cows

Star Sanitary Water Bowls will quickly return their cost. They cut out the winter slump in the production of milk. To the man who sells milk, they mean spring quantity at winter prices.

Tempered water given the cow in the stall is more relished than icy water from the trough in the unsheltered barnyard.

The bowl can be instantly detached from the pipe and valve for cleaning, but cannot be accidentally loosened by the animal.

Star Water Bowls are individual. No connection between one bowl and another. Work under any pressure. Valve opens by pressure on the lever, and closes automatically. Valve lever can be raised and bowl cleaned without removing from valve, if desired. Bowl is cast in one piece with no seams or corners.

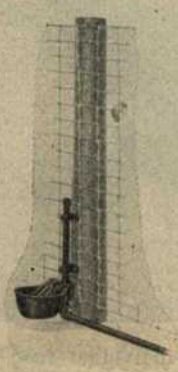
With each Water Bowl we regularly include the necessary fittings for attaching to steel or wood stalls. Special clamps for attaching to posts, etc., furnished on request at slight additional cost. Orders should specify how these bowls are to be attached.

Weight each, 14 lbs.

No. 850.....Each, 4.35

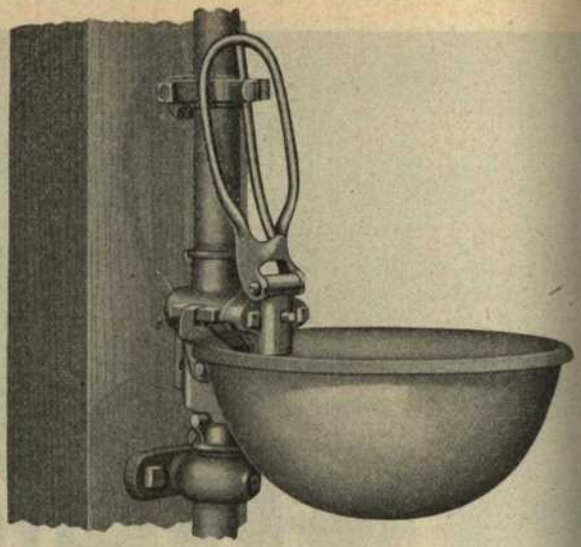
Attached to Star steel stalls. Supply from above. Fastened with clamp A-133.

Attached to wood upright. Supply from front of curb. Fastened with clamp A-267.



Attached to fence post for pasture watering. Fastened with clamp A-267.

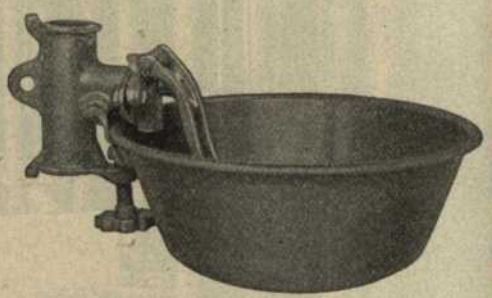
Illustrations above show a few different ways of attaching.



No. 984 For Horses

These bowls operate on the same principle as the No. 850 Star bowls, but are made slightly different in shape so that they are more adaptable for use by horses. They can also be used for cows and pigs if desired. The bowl is 9 inches in diameter and perfectly round and smooth on the inside, making it easy to clean. To prevent a horse from drinking too much water when he is overheated, a catch is placed above the bowl to hold the valve lever out of the bowl until the animal is cooled enough to drink without injury. With each bowl is included one complete valve and bowl, one bracket for attaching to wooden post, a pipe lock to prevent the bowl from twisting on the supply pipe and the clamp to hold the valve lever up to prevent the animal from drinking. Weight complete, 12½ lbs.

No. 984.....Each, 4.65



No. 1116

These bowls operate on the same principle as the No. 850, but are slightly different in shape and manner of attaching, and are lighter in weight. The valve operates by the animal pushing it down same as the other bowls. Furnished in two styles.

No. 1116, which is shown in illustration, is quickly attached or detached by the large screw at the bottom. When attached it is held rigidly in position.

No. 1115 is similar to No. 1116 except it is firmly attached by two bolts. The shape of the bowl, however, makes it easy to clean.

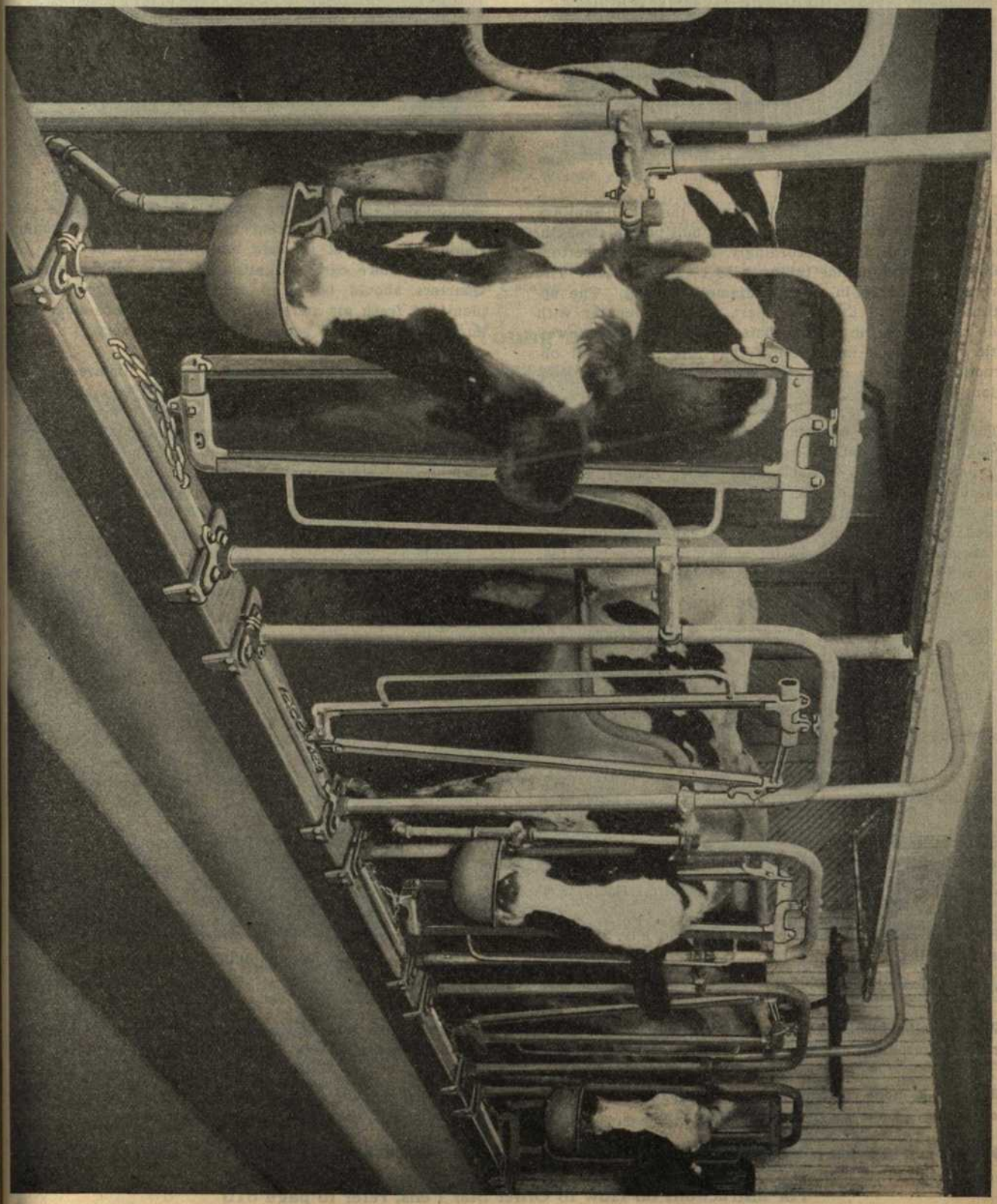
With each bowl is included the valve with large casting threaded ready to attach to water pipe.

No. 1116.....Each, 3.60
No. 1115.....Each, 3.30

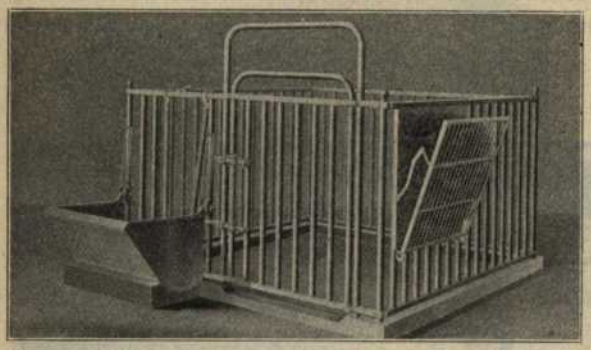
Dealers!! We can furnish a Special Display Stand for Water Bowls that will make sales for you. Write for full information.

A Constant Water Supply

The cut below illustrates the manner in which cows will use Star Water Bowls. Having water where it can be obtained whenever wanted, keeps the cows more contented, and results in greater milk production. Especially valuable during winter.



Star Steel Bull Pen



In the above illustration is shown the Star Sanitary Bull Pen. The first requirement of a bull pen is strength. The Star pen is built accordingly. The top and bottom rails are of rectangular tubing, size 1⅝x2⅝ inches. The uprights are of 1⅝-in. outside diameter tubing. The uprights are placed 6 inches apart center to center with ends inserted in the top and bottom rail, thus doing away with clamp irons and leaving the rails free of all obstruction. Easy to clean and keep in good sanitary condition.

The double arch construction of the gate adds to its strength and prevents it from sagging. The gate of the bull pen is hung on off-set hinges; when open it swings back flat against the pen. The double pin extra heavy lock of Hall safe pattern, locks automatically and is unlocked by turning a hand wheel. It cannot be unlocked by accident. Gate 3 ft. 10 in. wide. Bull Pen is 5 feet high and is finished in baked gray enamel. Weight about 30 lbs. per ft.

Bull Pen.....Per linear foot, 4.50

Gate Arch, Lock and Hinges only, not including Gate Panel. 7.20

Pen may be fitted with rigid stanchion as shown to hold bull while cleaning pen.

Stanchion Extra. . .....Each, 4.80

Star Sanitary self cleaning lifting manger for Bull Pen, a great feed saver. Weight 60 lbs.

Manger Extra. . .....Each, 18.00

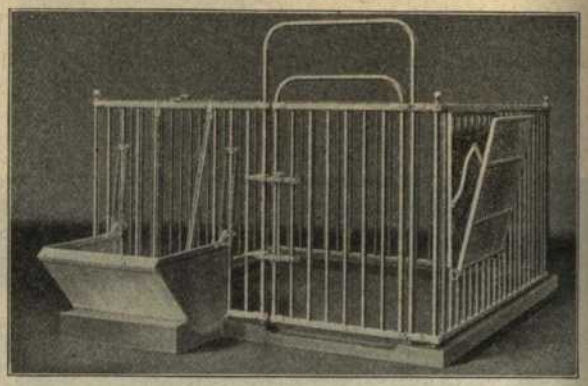
Hay rack shown in cut prevents waste of hay, 36x36 in. Weight 42 lbs.

Hay Rack Extra. .....Each, 9.00

We can also furnish these pens with built-in mangers. For full information ask for complete Star catalog.

Bull pen is made to order at factory in panels of any desired length. Finished in baked gray enamel.

Star Steel Cow Pen



The careful dairyman no longer allows his cows to pass through the calving period in the old rigid stanchion, risking the loss of the calf and injury to the cow. At this time more care and attention than ever is needed. Quarters should be clean and roomy, where there is plenty of fresh air and light. When cows are sick, good nursing is often the secret of speedy recovery.

The Star Cow Pen is easily cleaned, disinfected and put in perfectly sanitary condition.

Strongly constructed of 1½-in. square steel tubing for top, bottom and corners, and 1⅛-in. outside diameter tubing for uprights and stanchions. Height 5 ft. The sides are assembled into sections. The corner posts and gate arch are all that have to be imbedded in cement.

Gate is 3¼ feet wide and equipped with a single pin Hall safe pattern lock which locks automatically. Finished in baked gray enamel. Weight about 20 lbs. per foot.

Cow Pen. . .....Per linear foot, 3.15

Gate Arch, Lock and Hinges only, not including Gate Panel. 7.20

Pen may be fitted with rigid stanchion as shown to hold cow while cleaning pen.

Stanchion Extra. . .....Each, 4.80

It may also be provided with a self-cleaning, sanitary lifting manger. Weight 60 lbs.

Manger Extra. . .....Each, 18.00

The Hayrack shown in the illustration is a great saver of feed. Size 36x36 ins. Weight, 42 lbs.

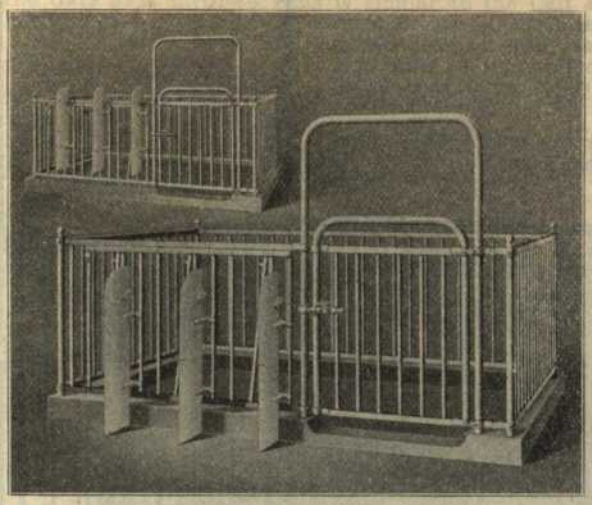
Hay Rack Extra. .....Each, 9.00

We can also furnish these pens with built-in mangers. For full information ask for complete Star catalog.

Cow Pen is made up to order at factory in panels of any desired length. Finished in baked gray enamel.

For instructions on How to Order Star Pens, refer to page 610

Star Steel Calf Pen



The Star Calf Pen is strong, simple and easily set up. It is of the same general construction as the Bull Pen, except that we use 1½ in. square steel tubing for top, bottom and corners, and 1⅛ in. outside diameter tubing for uprights and stanchions. Height 3½ ft. The sides are assembled into sections. The corner posts and gate arch are all that have to be imbedded in cement. Weight per ft., 15 lbs. The gate is equipped with a single pin Hall safe pattern lock which locks automatically. Gate is 3¼ ft. wide. The stanchions, by means of a continuous locking bar, can be opened and closed at one time or singly, as desired. Weight about 15 lbs. per ft.

Calf Pen.....Per linear foot, 2.85
Gate Arch, Lock and Hinges only, not including Gate Panel.....Each. 7.20
Calf Stanchions built in panel, extra.....Each, 1.20

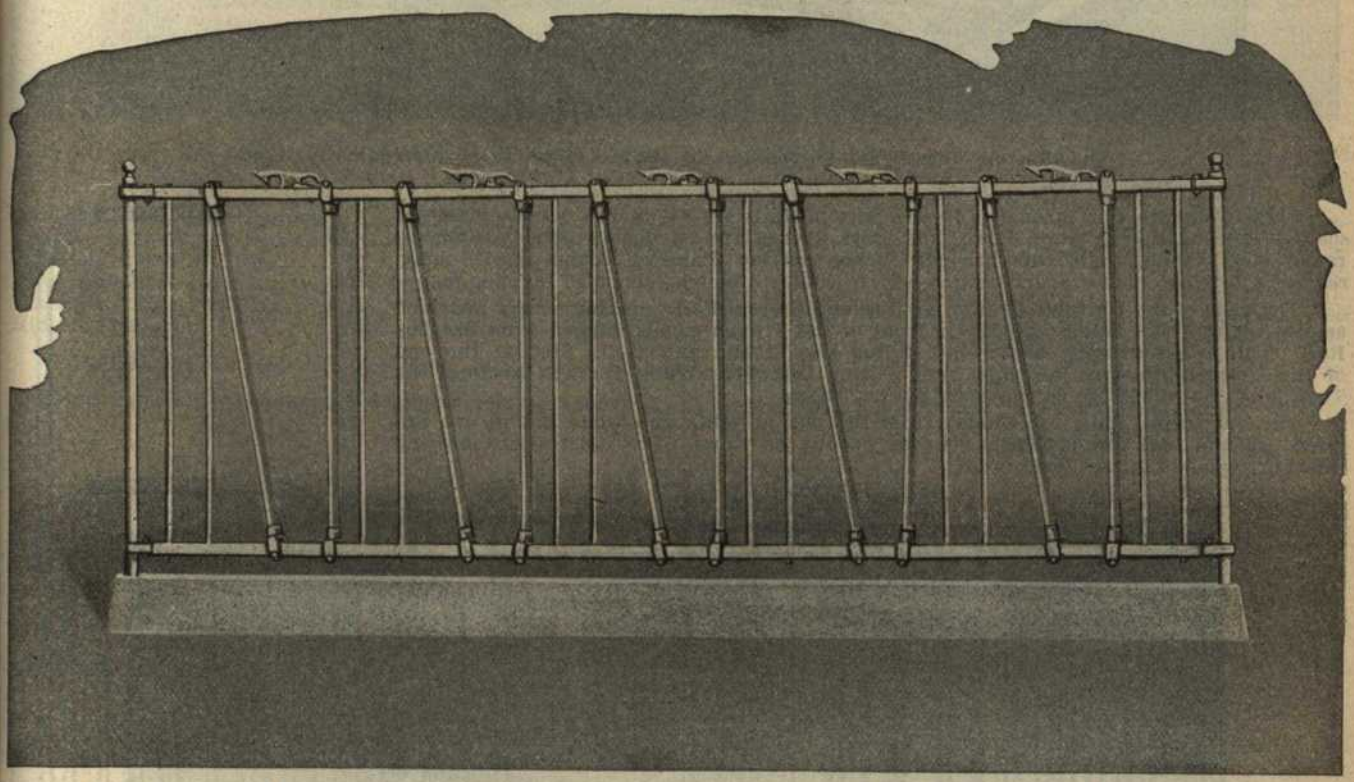
Feed guards as shown in the illustration, prevent the calves from forming the habit of sucking each other's ears. They may be raised to clean the manger trough. Weight each, 20 lbs.

Feed Guards, extra.....Each, 3.90

Made up to order at factory in panels of any desired length. Finished in baked gray enamel.

We can also furnish these Pens with Hay Racks, Feed Bowls, Pail Holders, etc. For full information, ask for complete Star Catalog.

Star Steel Young Stock Pen



Designed especially to take care of large calves, yearlings, etc. . Top and bottom rails are 1½ inch square steel tubing. Uprights are 1⅛ in. O. D. steel pipe spaced 5 inches apart. ½ inch tie rods extending through the uprights bind the panels together rigidly. Stanchions are spaced 30 inches apart on centers, unless otherwise specified. The stanchion uprights are 1⅛x⅞ U bars attached at top and bottom with malleable clamps. Weight about 20 lbs. per ft.

These clamps are also arranged to provide adjustment which will take care of any size animal. This Pen is 5 ft. high same as Cow Pens and can be furnished with the same Arch Gates and at the same price.

Star Steel Young Stock Pen.....Per linear foot, 3.15
Gate Arch. Lock and Hingles only, not including Gate Fittings.....Each, 7.20
Stanchions, built in panel, extra.....Each, 2.10

Made up to order at factory in panels of any desired length. Finished in baked gray enamel.

For instructions on How to Order Star Pens, refer to page 610

Star Steel Hog Pens

This is a very important part of successful hog raising. Star Pens do not obstruct light and are big factors in allowing plenty of ventilation and are easy to keep clean. They are easy to install, for they are built on exactly the same principle as Star Calf and Cow Pens and each panel is assembled at the factory. Only the Corner Posts and Gate Arches need to be imbedded in the cement.

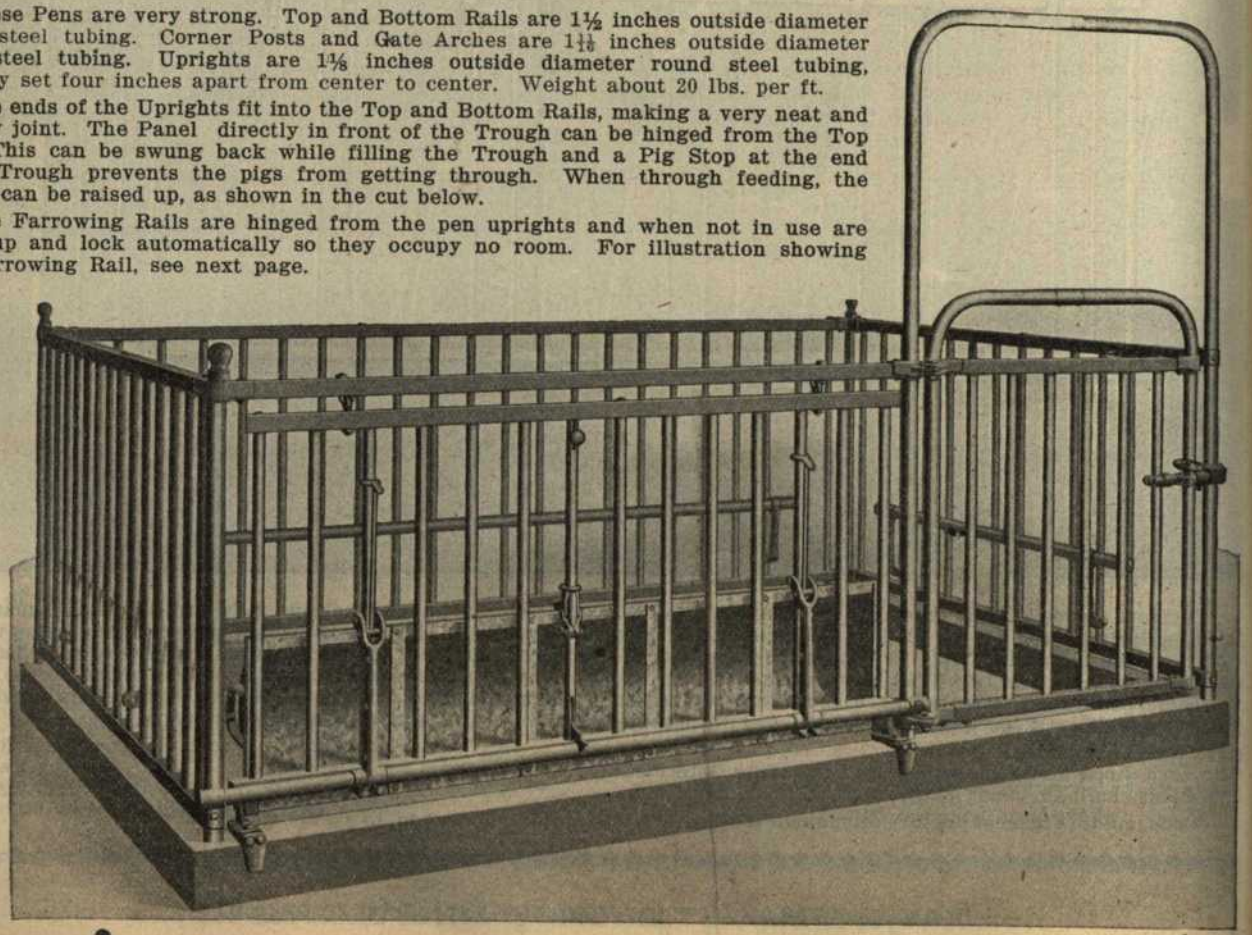
These Pens also lessen the labor in feeding and caring for the hogs. They have proven a big help in preventing hog cholera, because of the cleanliness.

Showing movable Front in position to allow Trough to be conveniently filled.

These Pens are very strong. Top and Bottom Rails are 1½ inches outside diameter square steel tubing. Corner Posts and Gate Arches are 1¹⁵⁄₁₆ inches outside diameter round steel tubing. Uprights are 1⅛ inches outside diameter round steel tubing, regularly set four inches apart from center to center. Weight about 20 lbs. per ft.

The ends of the Uprights fit into the Top and Bottom Rails, making a very neat and sanitary joint. The Panel directly in front of the Trough can be hinged from the Top Rail. This can be swung back while filling the Trough and a Pig Stop at the end of the Trough prevents the pigs from getting through. When through feeding, the Trough can be raised up, as shown in the cut below.

The Farrowing Rails are hinged from the pen uprights and when not in use are raised up and lock automatically so they occupy no room. For illustration showing this Farrowing Rail, see next page.



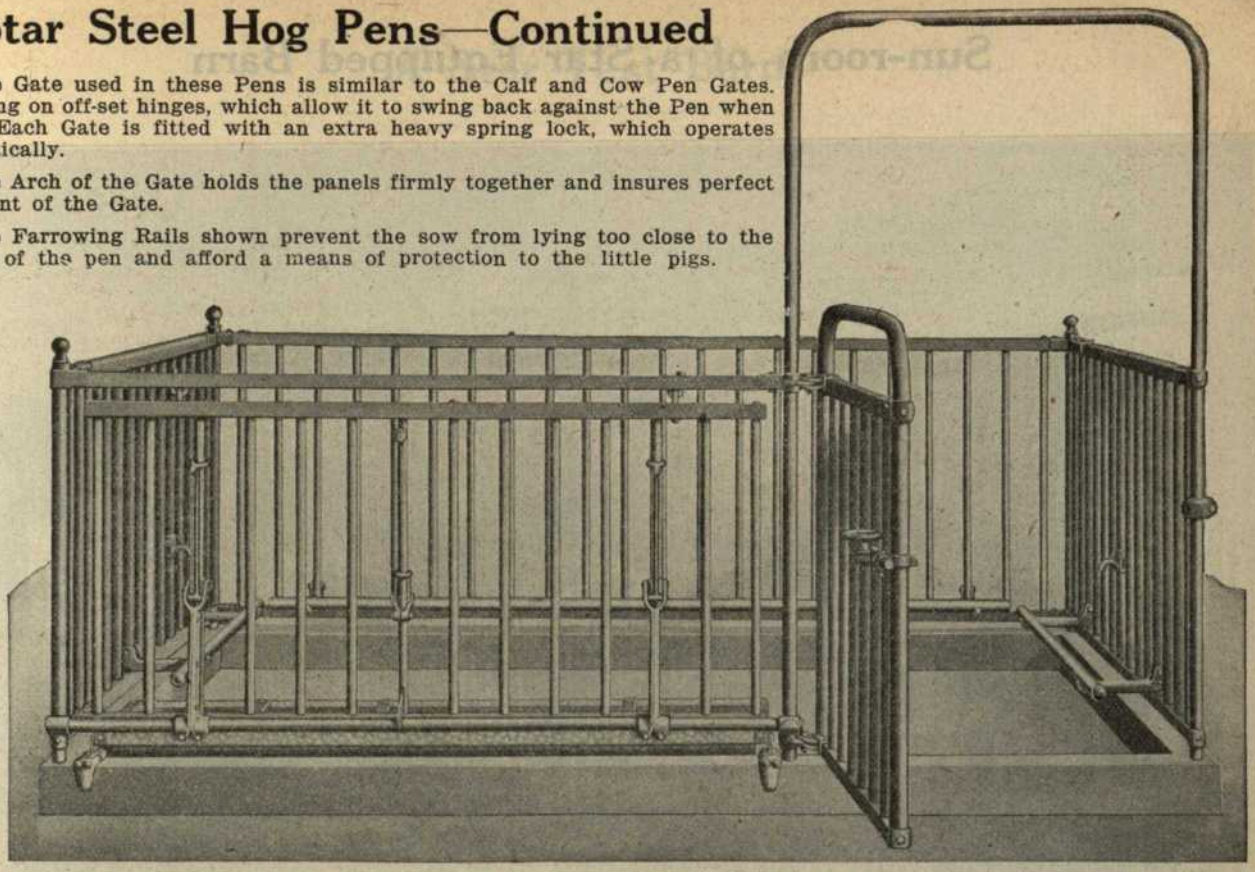
Showing Trough raised and held automatically, ready to be flushed.

Star Steel Hog Pens—Continued

The Gate used in these Pens is similar to the Calf and Cow Pen Gates. It is hung on off-set hinges, which allow it to swing back against the Pen when open. Each Gate is fitted with an extra heavy spring lock, which operates automatically.

The Arch of the Gate holds the panels firmly together and insures perfect alignment of the Gate.

The Farrowing Rails shown prevent the sow from lying too close to the outside of the pen and afford a means of protection to the little pigs.



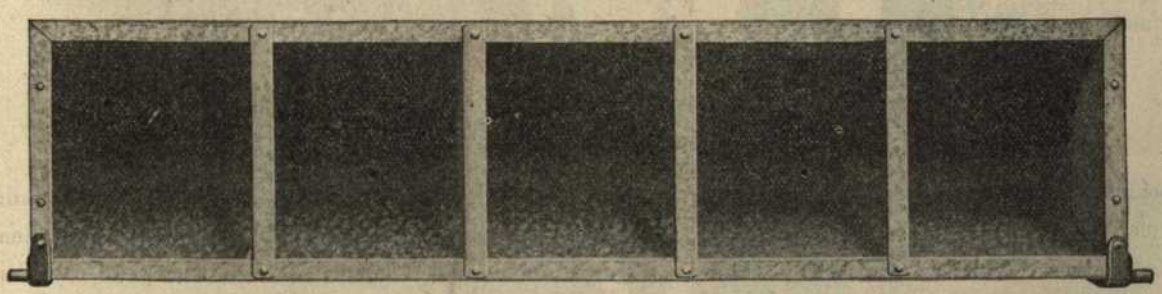
Showing Double Arched Gate and Farrowing Rail.

Star Steel Hog Pen Equipment	Per lineal foot, 3.15
Gate Arch, Lock and Hinges only, not including Gate Panel	Each, 7.20
Pig Stop at end of Trough	Each, 3.60
Farrowing Rail, complete with Attachments	Per foot, .75
Farrowing Rail Posts for use where either wood or cement wall form sides of Pen	Each, .90
Hinges, Operating Lever and Attachments for swinging front panel	9.00

Troughs are not included with Pens, except at extra cost (see below).

Hog Pens are made up to order at factory in panels of any desired length. Finished in baked gray enamel.

Star Steel Hog Troughs



Star Hog Troughs are substantially built of 20-gauge steel. After completed they are thoroughly galvanized, which process solders all joints and gives a construction which is not only water tight, but very durable.

This construction is far superior to troughs made of galvanized iron with soldered joints. The cross-pieces add rigidity to the trough and prevent the hogs from getting into the trough while eating.

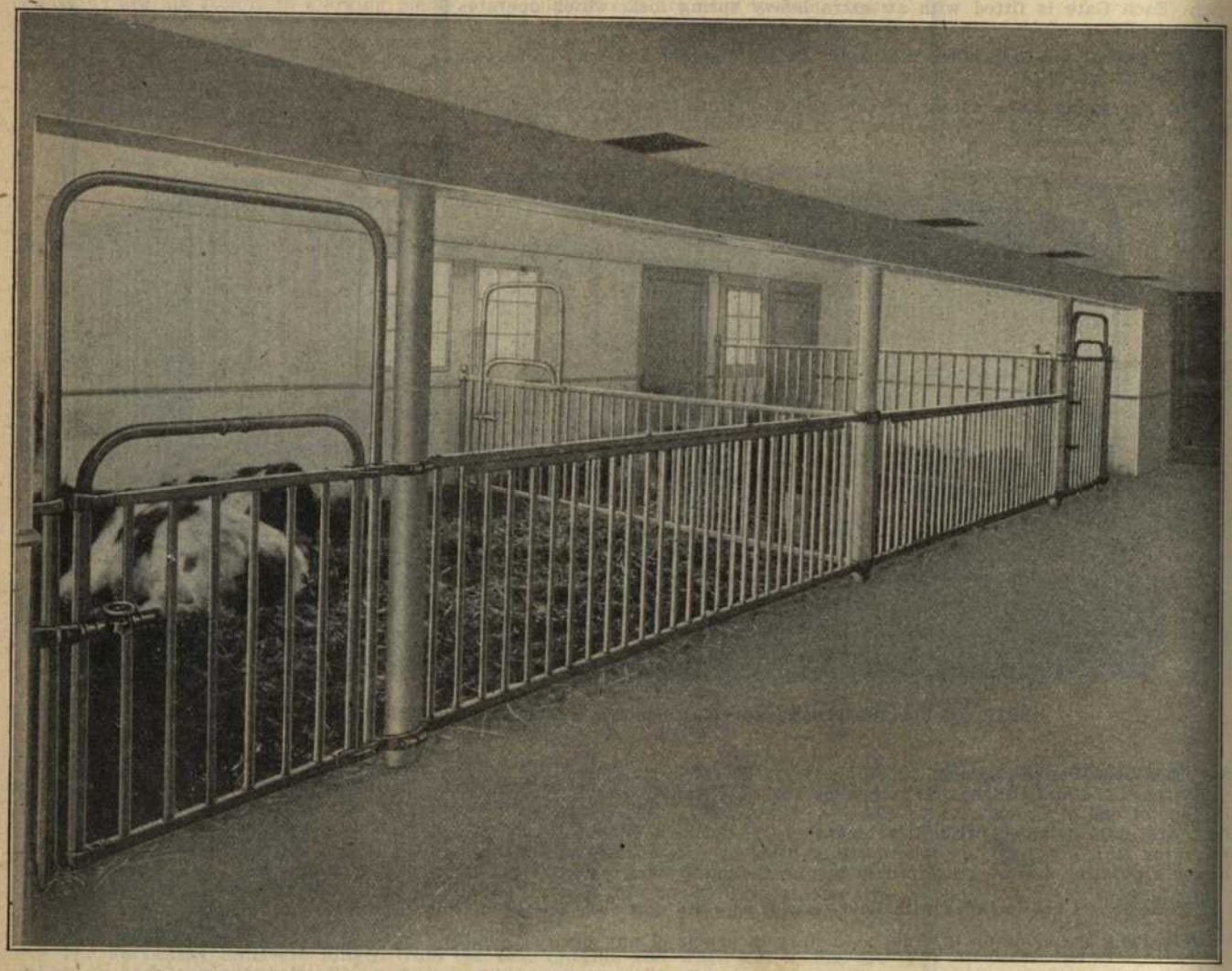
Each trough is furnished complete with hinges and clamps for attaching to a four-inch concrete curb. Substantial floor rests are fitted at each end of the trough to support it when in position.

The rounding shape of the bottom of the trough renders it sanitary and self-cleaning when raised. This construction permits of no square corners so that it can conveniently be flushed.

Star Hog Troughs furnished in 4-ft., 6-ft. and 8-ft. lengths. 4-ft. weighs 40 lbs.; 6-ft. weighs 50 lbs., and 8-ft. weighs 60 lbs.

4-ft., Complete with Clamps	Each, 9.30
6-ft., Complete with Clamps	Each, 12.00
8-ft., Complete with Clamps	Each, 13.50

Sun-room of a Star Equipped Barn



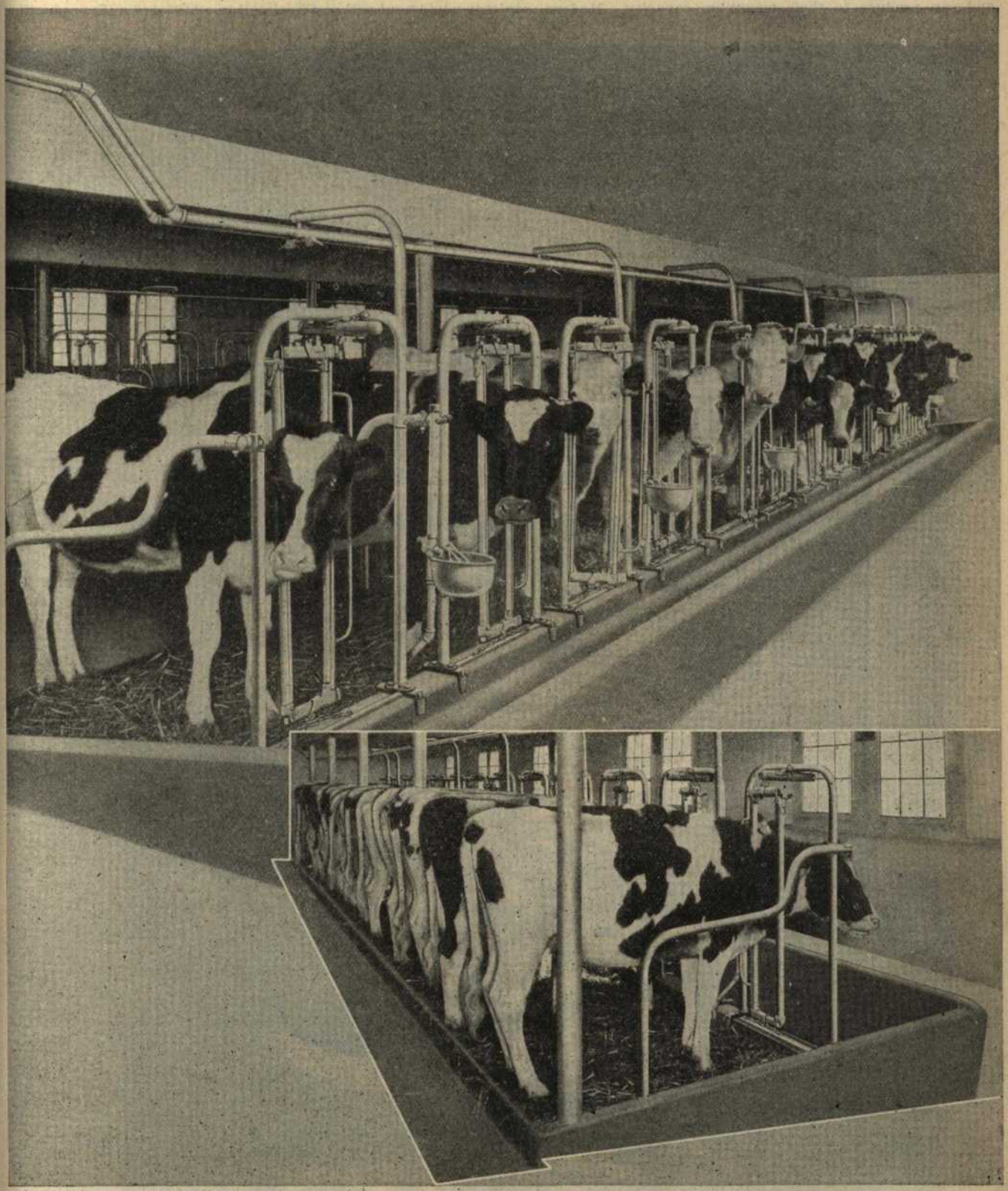
The above photograph shows some Star pens in actual use. They offer no obstruction to the light and are a great aid in keeping sanitary quarters. Calves raised under such conditions are the kind that make prize winners and the kind that make money for their owners.

How to Order Star Pens

All pens are made to order and it is necessary in each case to know the exact measurements and arrangement. The best plan is to send a rough sketch showing the main floor plan of the entire barn. It should show the location of the pens and also where the Gates, Stanchions, Mangers, etc., are to be placed. Location and size of posts or columns should also be indicated. A blue print is not necessary, simply a rough sketch, being sure all measurements are exact.

To avoid delay and enable us to handle your orders for Barn Equipment properly, always send in a rough sketch of the barn, showing location of Stalls, Pens, Doors, Silos, etc.

A Star Test Barn

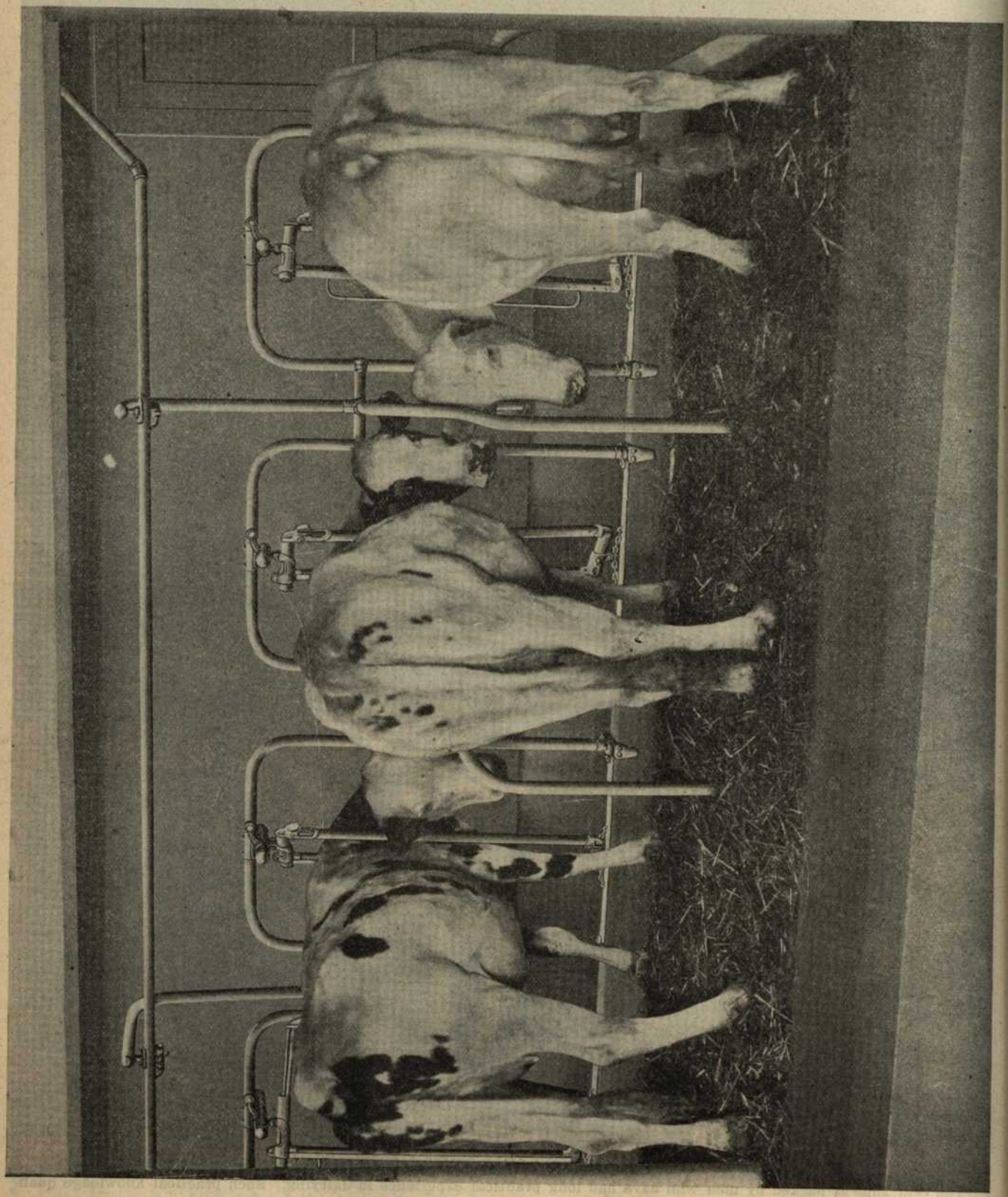


The Star Line is backed by men who have had long practical experience in dairying. Such practical knowledge qualifies them to know how to plan your equipment and to produce it at a reasonable cost.

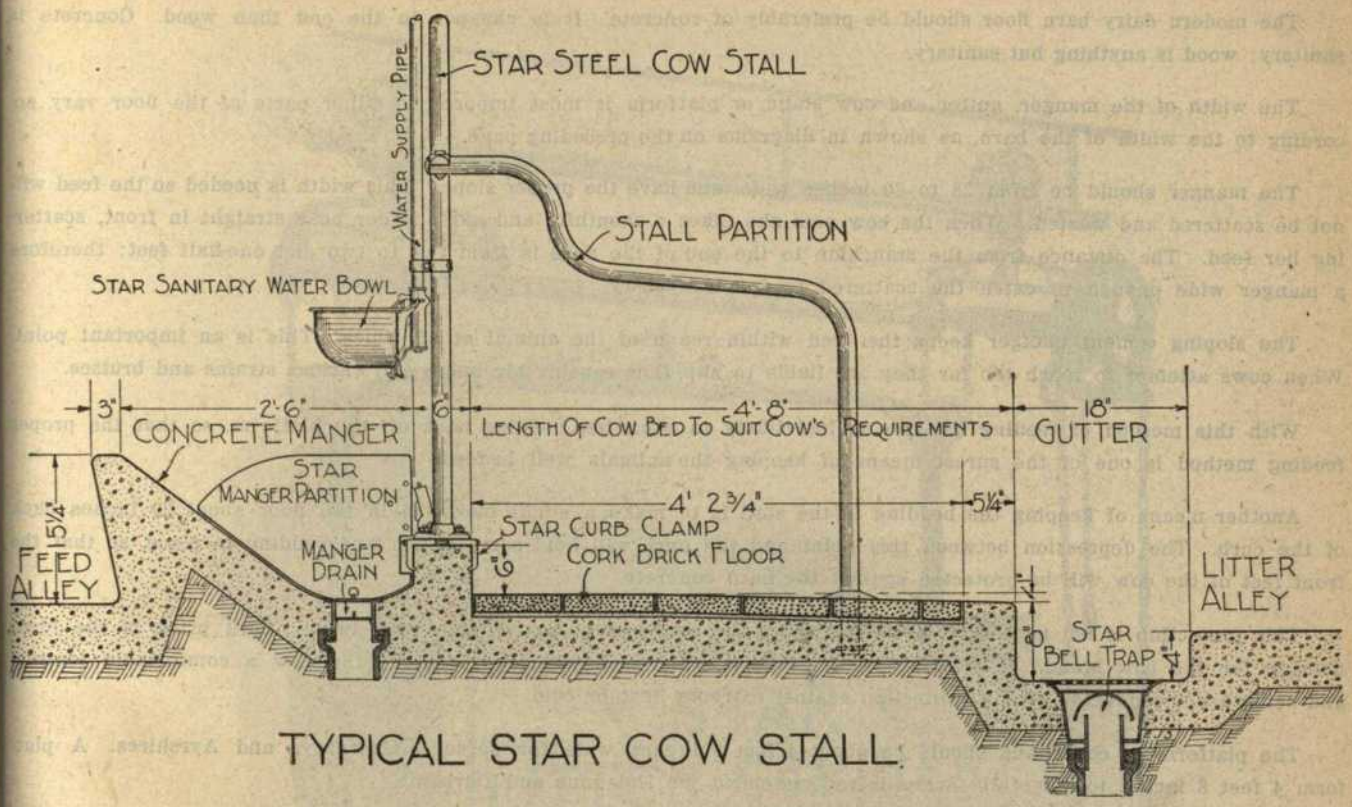
This illustration shows one of the barns in which Star products are tested and given actual use. The thorough testing given Star goods insures their being practical in every respect.

Star Stalls Afford Plenty of Freedom

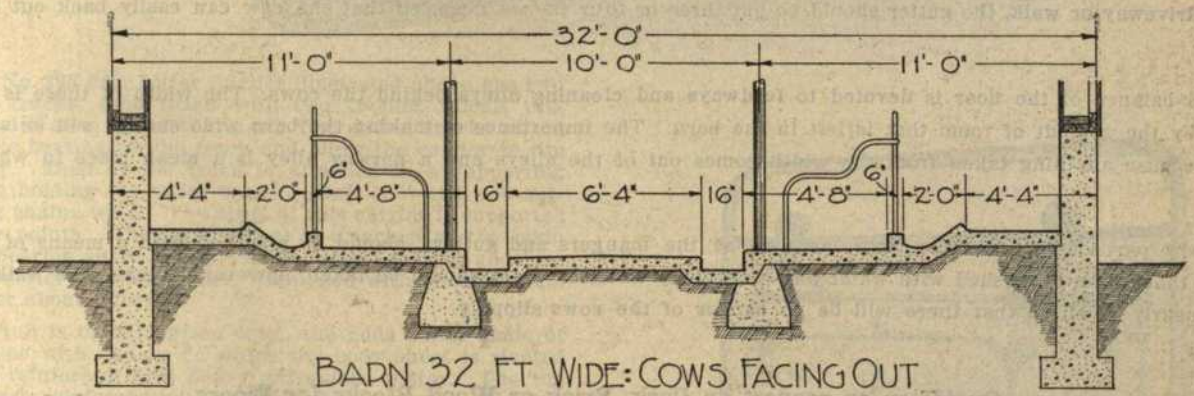
The cut below illustrates the freedom permitted cows in Star Stalls. Cows cared for in this manner are contented and can produce to their maximum capacity. Modern, sanitary equipment will pay for itself in additional milk production.

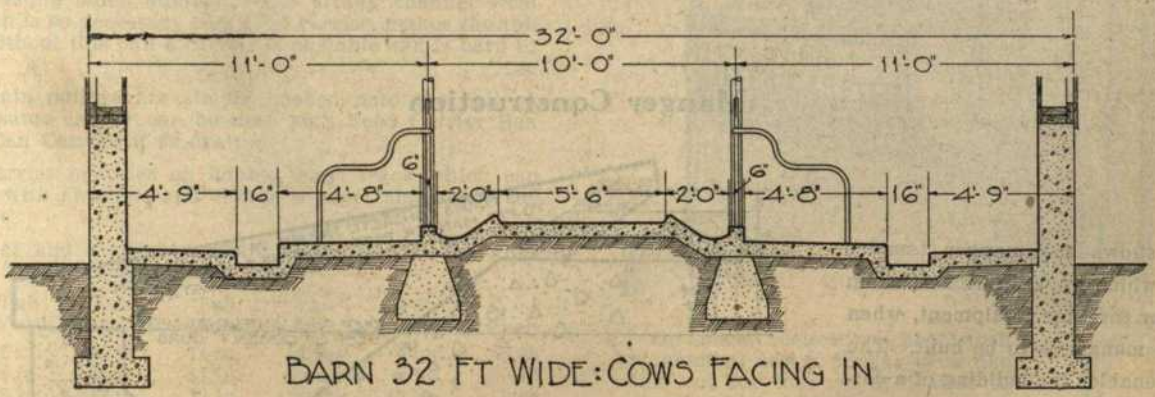


Dairy Barn Floor Construction



Above cut illustrates the correct arrangement for cow stalls. Cows kept in comfortable Star Stalls will produce the maximum amount of milk.





The illustrations above show full width measurements of a 32-ft. barn with cows facing in or out. Variations in width can be taken care of in the alleyways back and front of the cows. The cow bed should also be varied according to the size of cows. Usually it should be 4 ft. 6 inches for Jerseys, Guernseys and Ayrshires and 2 to 4 inches longer for Holsteins, Durhams, etc.

Arrangement of Floor

The modern dairy barn floor should be preferably of concrete. It is cheaper in the end than wood. Concrete is sanitary; wood is anything but sanitary.

The width of the manger, gutter and cow stand or platform is most important. Other parts of the floor vary according to the width of the barn, as shown in diagrams on the preceding page.

The manger should be from 28 to 30 inches wide, and have the proper slope. This width is needed so the feed will not be scattered and wasted. When the cow eats she takes a mouthful and extends her nose straight in front, scattering her feed. The distance from the stanchion to the end of the nose is from two to two and one-half feet; therefore a manger wide enough to catch the scattered feed is necessary.

The sloping cement manger keeps the feed within reach of the animal at all times. This is an important point. When cows attempt to reach too far they are liable to slip, thus causing big knees and various strains and bruises.

With this method of feeding the cow is less likely to work her bedding back off the platform, so that the proper feeding method is one of the surest means of keeping the animals well bedded.

Another means of keeping the bedding in the stall is to make a slight elevation in the floor about 20 inches back of the curb. The depression between this point and the curb will hold some of the fine bedding in place, so that the front feet of the cow will be protected against the hard concrete.

This protection is not necessary, however, where the cow bed is paved with cork brick. Cork brick is the ideal flooring for the cow stand. It is water-proof, easily cleaned and sanitary. It gives the cow a comfortable footing, and being a non-conductor, it is a protection against extreme heat or cold.

The platform or cow stand should be about 4 feet 6 inches wide for Jerseys, Guernseys and Ayrshires. A platform 4 feet 8 inches to 4 feet 10 inches is recommended for Holsteins and Durhams.

The gutter should be 8 to 10 inches deep on the side of the cow stand, and 18 to 20 inches wide. Constructed in this manner the gutter is wide and deep enough to accommodate the manure and keep the cows clean. On the side of the driveway or walk, the gutter should be but three or four inches deep, so that the cow can easily back out of the stall.

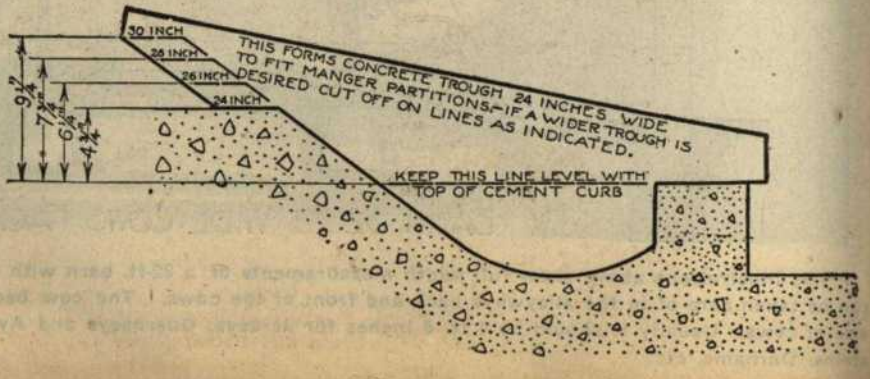
The balance of the floor is devoted to feedways and cleaning alleys behind the cows. The width of these is determined by the amount of room that is left in the barn. The importance of making the barn wide enough will be seen at once, because anything taken from the width comes out of the alleys and a narrow alley is a mean place in which to work.

Every part of the concrete floor, as well as the mangers and gutters, should be provided with a means of drainage, so that it can be flushed with water and thoroughly cleaned. Care should be taken, however, to make the walks and alleys nearly level, so that there will be no danger of the cows slipping.

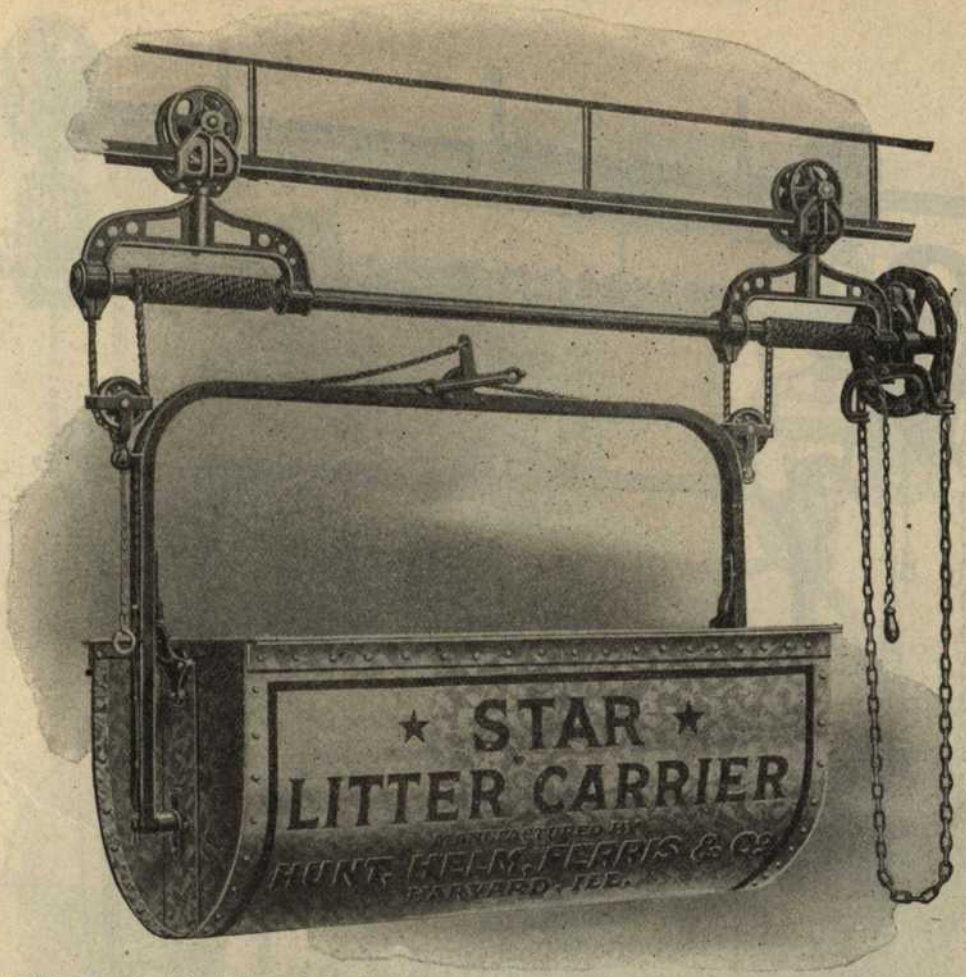
Quotation on request on Cork Brick or Wood Blocks for Floors.

Manger Construction

This shows the manger templet or form which we will furnish free on any order for Star Equipment, when concrete manger is to be built. The templet enables the building of a correctly shaped manger.



No. 333 Star Litter Carrier



The No. 333 Star Litter Carrier illustrated above has two swivel trucks, each fitted with two tracker wheels provided with steel roller bearings. The swivel trucks afford a double bearing on the track and allow the carrier to run steadily. Each swivel truck is attached to a supporting bracket holding the roller bearing shaft on which the supporting chains wind. The shaft of this carrier is supported at four points. The large wheel is attached to the main roller bearing shaft, making it the fastest raising and lowering carrier on the market. Equipped with enough chain to lower about 7 feet.

The tub is of galvanized steel, the ends being made of one piece with flanges to which the body sheet is riveted and is reinforced with heavy galvanized plates. The top edges are reinforced with galvanized angle iron. The tub is self-cleaning when dumped. The strong channel steel bail, which is so necessary to a good carrier, makes the tub rigid. Without this bail a carrier is unstable and is hard to lock.

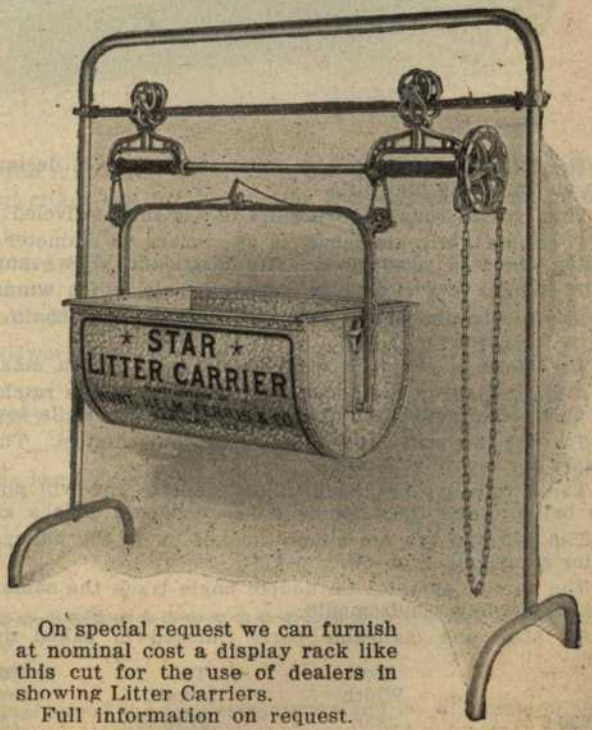
The chain pulleys are simply hooked onto the bail so that the same carrier can be used with Feed Carrier Box or Milk Can Carrier, if so desired.

This carrier operates on double angle track which can be fitted with switches and curves to meet almost any requirement.

All steel and malleable parts finished in baked gray enamel. Tub is galvanized.

No.	Tub Width	Tub Length	Tub Depth	Tub Wt.	Tub Cap.	Each
333-2	26 in.	41 in.	14 in.	91 lbs.	6 bu.	48.00
333-4	26 in.	41 in.	17 in.	93 lbs.	8 bu.	50.40
333-6	26 in.	41 in.	19 in.	95 lbs.	10 bu.	52.80
333-8	34-in.	41 in.	24 in.	130 lbs.	12 bu.	56.40

Weight of Carrier No. 333 without tub, 50 lbs.

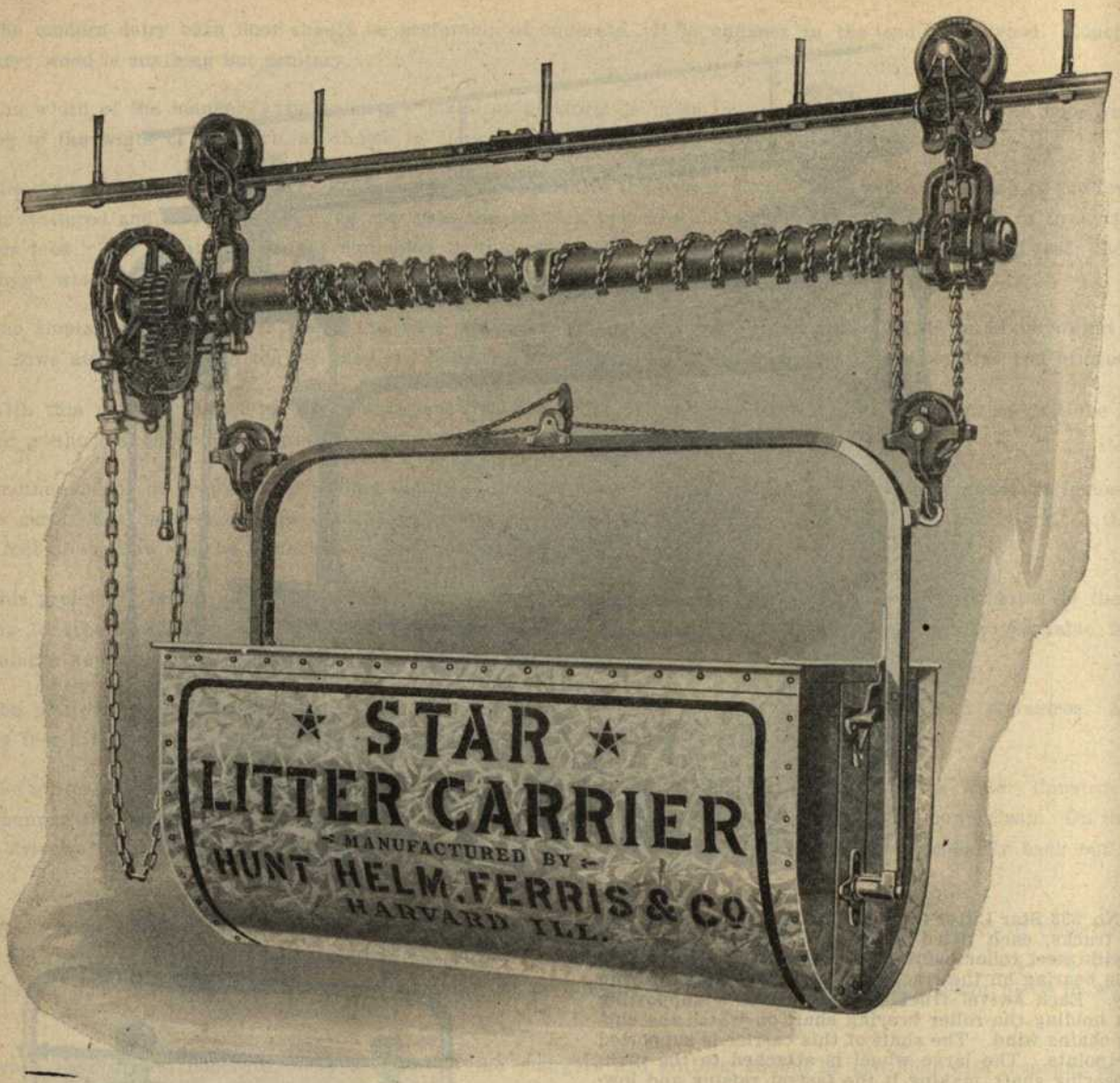


On special request we can furnish at nominal cost a display rack like this cut for the use of dealers in showing Litter Carriers.

Full information on request.

For Track and Fixtures, see page 619.

No. 930 Star Heavy Duty High Lift Litter Carrier



The No. 930 Litter Carrier illustrated above is designed for especially heavy work and also where it is necessary to have an unusually high lift.

This carrier runs on two pairs of 4½ inch swiveled tracker wheels which are fitted with roller bearings.

The main horizontal shaft is 2⅜ inches in diameter and revolves on roller bearings. The space on which the hoisting chain is wrapped is extra large and allows unusual lift.

The chain is a close link machine chain which winds very closely.

The illustration shows the carrier fitted with chain for an ordinary lift. By using longer chains the height of lift can be increased to 12 feet.

The Hoist is equipped with double gears which make it possible to lift a heavy load easily and quickly.

A slight pull on the short hand chain frees the ratchet and allows the tub to descend. A strong pull on this chain sets the brake controlling the speed of the tub while lowering.

The tub is constructed of heavy galvanized steel. The top and edges are reinforced with galvanized angle iron. Corners are securely riveted.

These tubs are practically indestructible and will not get out of shape. They are held rigid by a channel iron bail. This bail protects the tripping mechanism and adds a great deal to the life of the carrier.

The bail and tub are simply hooked on to the pulleys and are interchangeable with a feed carrier tub or milk can carrier as described on other pages.

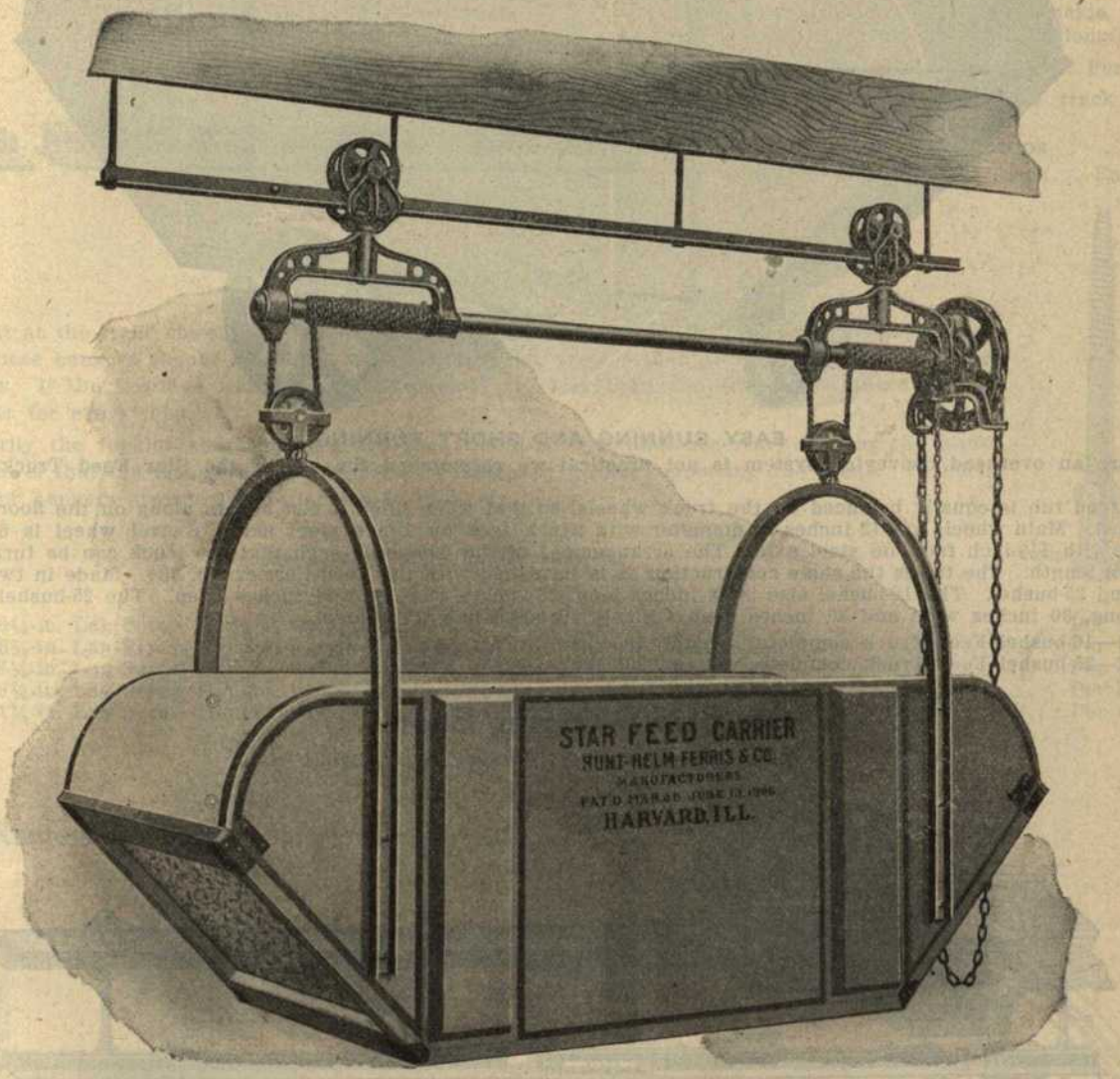
The carrier operates on double angle track the same as No. 333 which can be fitted with switches and curves to meet almost any requirements.

All steel and malleable parts finished in baked gray enamel. Tub galvanized.

	Tub Width	Tub Length	Tub Depth	Tub Capacity	Tub Weight	
No. 930-6	26 in.	41 in.	19 in.	10 bu.	95 lbs.	62.40
No. 930-8	34 in.	41 in.	24 in.	12 bu.	130 lbs.	66.00

Weight of Carrier without Tub, 100 lbs.

No. 334 Star Feed Carrier



In construction and operation this carrier is identical with the Star Litter Carrier No. 333, except that it is provided with a tub for handling feed. The tub shape permits the use of either end for distributing the feed and it can be used by two men, one working from each end.

The bottom and ends of the tub are made of heavy galvanized iron, making it easy to shovel. The bail of this carrier being made oval at the top permits the greatest freedom in shoveling. The bail extends nearly to the bottom of the tub and is constructed of heavy channel steel. Equipped with enough chain to lower 7 feet.

All steel and malleable parts finished in gray enamel. Woodwork carefully sandpapered, given a lead and oil coat with final waterproof coat of varnish enamel.

The tub is 68 in. long, 26 in. wide and 24 in. high. Capacity of this Tub is 16 bushels. Weight of Carrier and Tub, complete, 195 lbs.

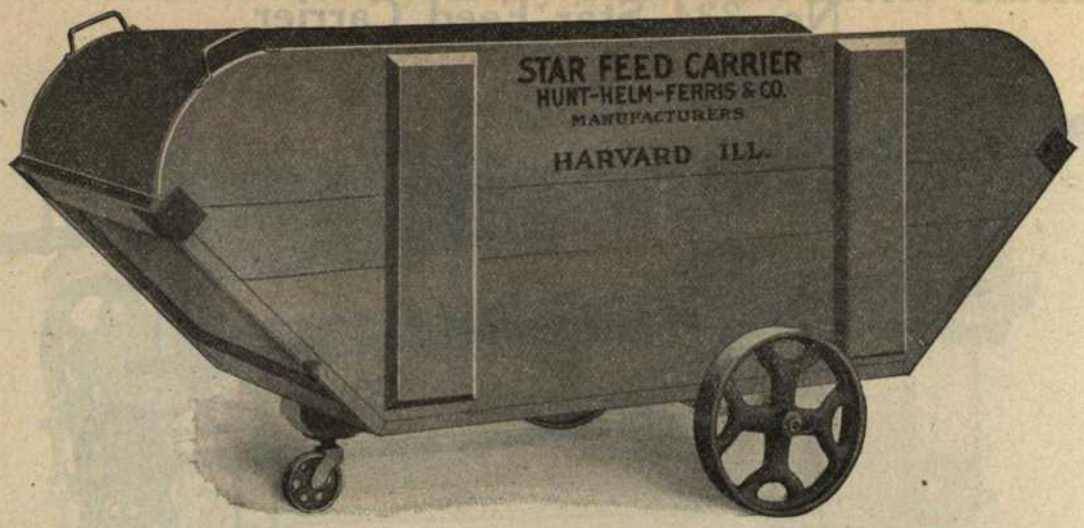
The chain pulleys are simply hooked onto the bail so that the same Carrier can be used with Litter Tub or Milk Can Carrier if so desired.

No. 334—Carrier and Tub.....Each, 52.80

Pit Silo Outfits

Write us for information on Pit Silo Outfits. Tell us definitely what the requirements are and we will quote on an outfit that will give satisfaction.

No. 443 Star Feed Truck



EASY RUNNING AND SHORT TURNING.

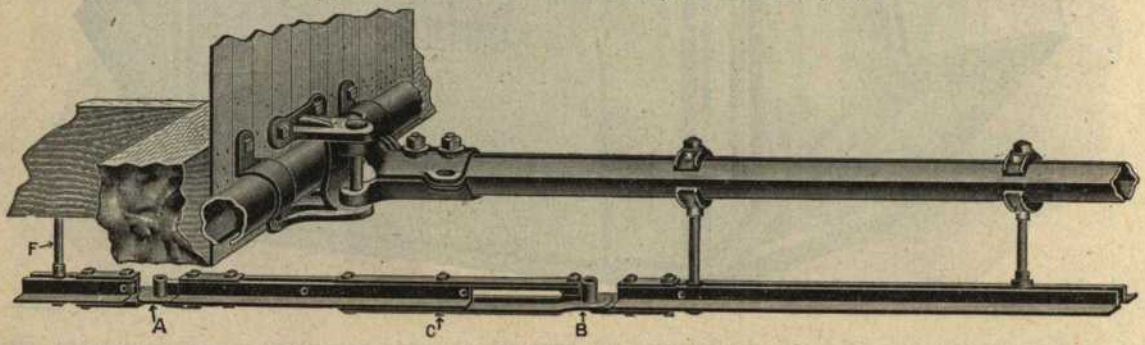
Where an overhead conveying system is not practical we recommend the use of the Star Feed Truck as shown above.

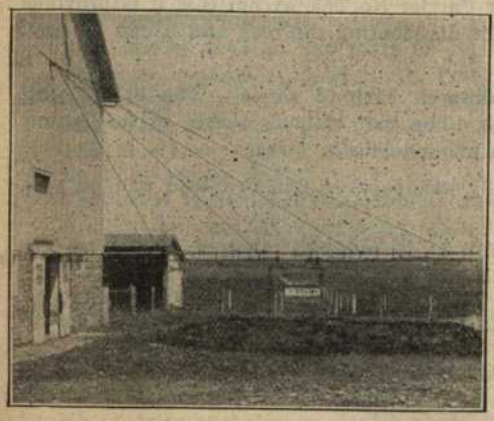
The feed tub is equally balanced on the truck wheels, so that when filled it can be run along on the floor with very little effort. Main wheels are 12 inches in diameter with 2-inch face on 1-inch steel axle. Swivel wheel is 6 inches in diameter with 1½-inch face, on steel axle. The arrangement of the wheels is such that the truck can be turned around in its own length. The tub is the same construction as is furnished with the Feed Carrier No. 334. Made in two sizes, 16-bushel and 25-bushel. The 16-bushel size is 68 inches long, 26 inches wide and 24 inches deep. The 25-bushel size is 71 inches long, 30 inches wide and 30 inches deep. Nicely finished in gray enamel.

No. 443-1—16-bushel Feed Truck complete; weight, 190 lbs.....Each, 40.80
No. 443-2—25-bushel Feed Truck complete; weight, 225 lbs.....Each, 50.40

Star Swinging Boom

Shipped only direct from factory at Harvard, Ill.





The swinging boom is made of heavy 2x2 inch galvanized steel angles. It offers the most satisfactory method of hanging litter carrier track outside of the barn. It leaves the yard entirely free of posts and provides a larger dumping area than obtainable with a stationary track. The telescoping section "C" shown in the illustration is supported on pivot pins "A" and "B." This can be lifted out to permit the closing of a sliding door.

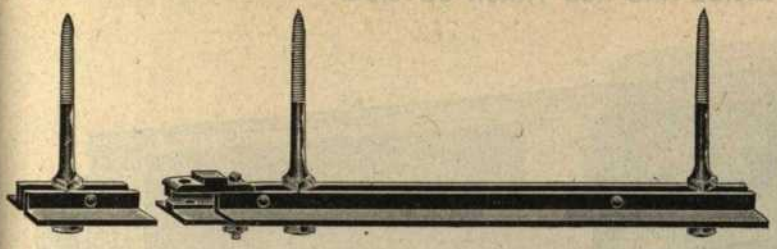
The length of the boom depends on the height of the barn. The distance above the point where the boom hinge is bolted to the building to where the guy rods are attached should be equal to half the length of the boom. In ordering the boom be sure to state what the distance is so the guy wires may be cut the proper length. Weight of boom, per ft., complete, 7½ lbs. Below are shown the lengths of booms and prices complete with braces, guy wires, telescoping section, track and hangers of the shortest length. Where it is necessary to have longer hangers we can furnish at a proportionately higher price.

All Swinging Booms Made Up to Special Order at the Factory

15 ft., complete with guy wires, track, hangers and telescoping section..... 45.00
20 ft., complete with guy wires, track, hangers and telescoping section..... 52.50
30 ft., complete with guy wires, track, hangers and telescoping section..... 69.00
35 ft., complete with guy wires, track, hangers and telescoping section..... 78.00
40 ft., complete with guy wires, track, hangers and telescoping section..... 84.00

We can also furnish Supports, Brackets and Braces for supporting Litter Carrier Track outside the barn. These are described fully in the Star general catalog which will be sent you on request.

Star Double Angle Litter Carrier Track



This track consists of two pieces of 1-inch angle steel riveted together. It has width as well as depth so it will not bend, sag or buckle. Weight per foot, 2 lbs. Made in 6 and 12-ft. lengths.

Double Angle Track.....Per ft., .27

Track couplings included with track without charge.

Track End Stops

End Stops for Double Angle Track....Each, .25

Hangers for Star Track

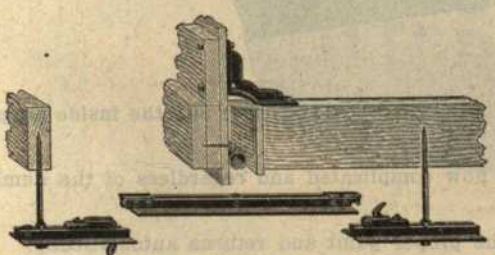
The cut at the right shows the hangers by which the Star Double Angle Steel Track is supported. These hangers should be placed at a distance not greater than two feet apart to get the best results. If the joists to which they are fastened are less than two feet apart, there should be a hanger for every joist.

Ordinarily the regular short hangers are used, but it is sometimes necessary to hang the track at such a level that the truck wheels will clear the beam or girder supporting the joists. In such cases, longer hangers are required as shown in the lists below:

Be sure to state length wanted.

No. 414—10¼-in. Lag Screw Hanger, weight per doz., 5 lbs.....Per doz., 2.40
No. 414—15¼-in. Lag Screw Hanger, weight per doz., 7½ lbs. to clear 6-in. beam.....Per doz., 2.85
No. 414—17¼-in. Lag Screw Hanger, weight per doz., 9 lbs. to clear 8-in. beam.....Per doz., 3.15
No. 414—19¼-in. Lag Screw Hanger, weight per doz., 10 lbs. to clear 10-in. beam.....Per doz., 3.45
No. 414—21¼-in. Lag Screw Hanger, weight per doz., 11 lbs. to clear 12-in. beam.....Per doz.. 3.60

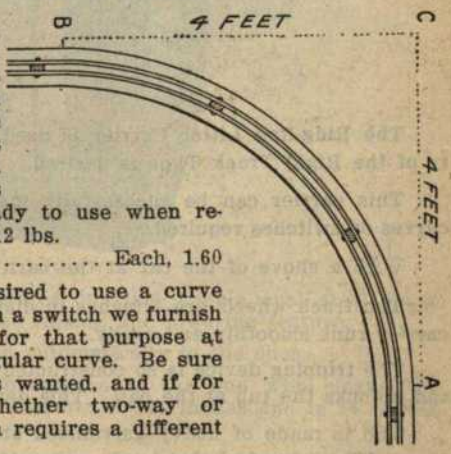
Removable Section of Track



Above illustration is a diagram showing a "lift out" or removable section which is used with Star double angle steel track. This can be lifted out to allow the operation of a sliding door and when replaced fits exactly, making the track just as rigid at this point as at any other.

No. 346—Removable Section.....Each, 1.95

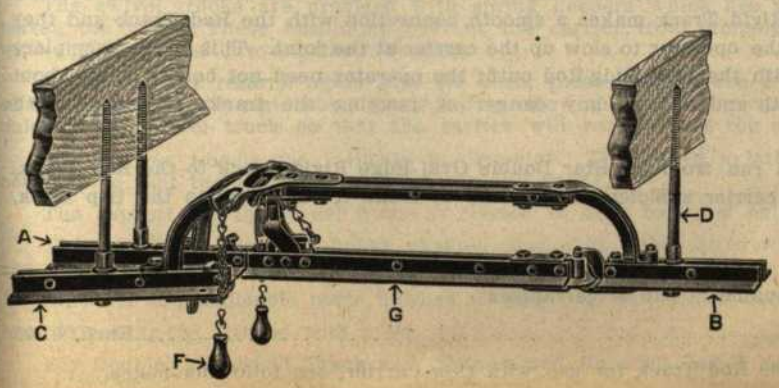
Track Curve



At the right is an illustration showing how the curve used with Star double angle steel track takes the place of 8 ft. of track. Curves are bent and ready to use when received. Weight, 12 lbs.

Track Curve.....Each, 1.60

Where it is desired to use a curve in connection with a switch we furnish a special curve for that purpose at same price as regular curve. Be sure to state which is wanted, and if for switch, state whether two-way or three-way as each requires a different length.



Switches

Two-way and Three-way.

Cut at left shows the Star Self-supporting Two-way Switch. Its operation and purpose are apparent.

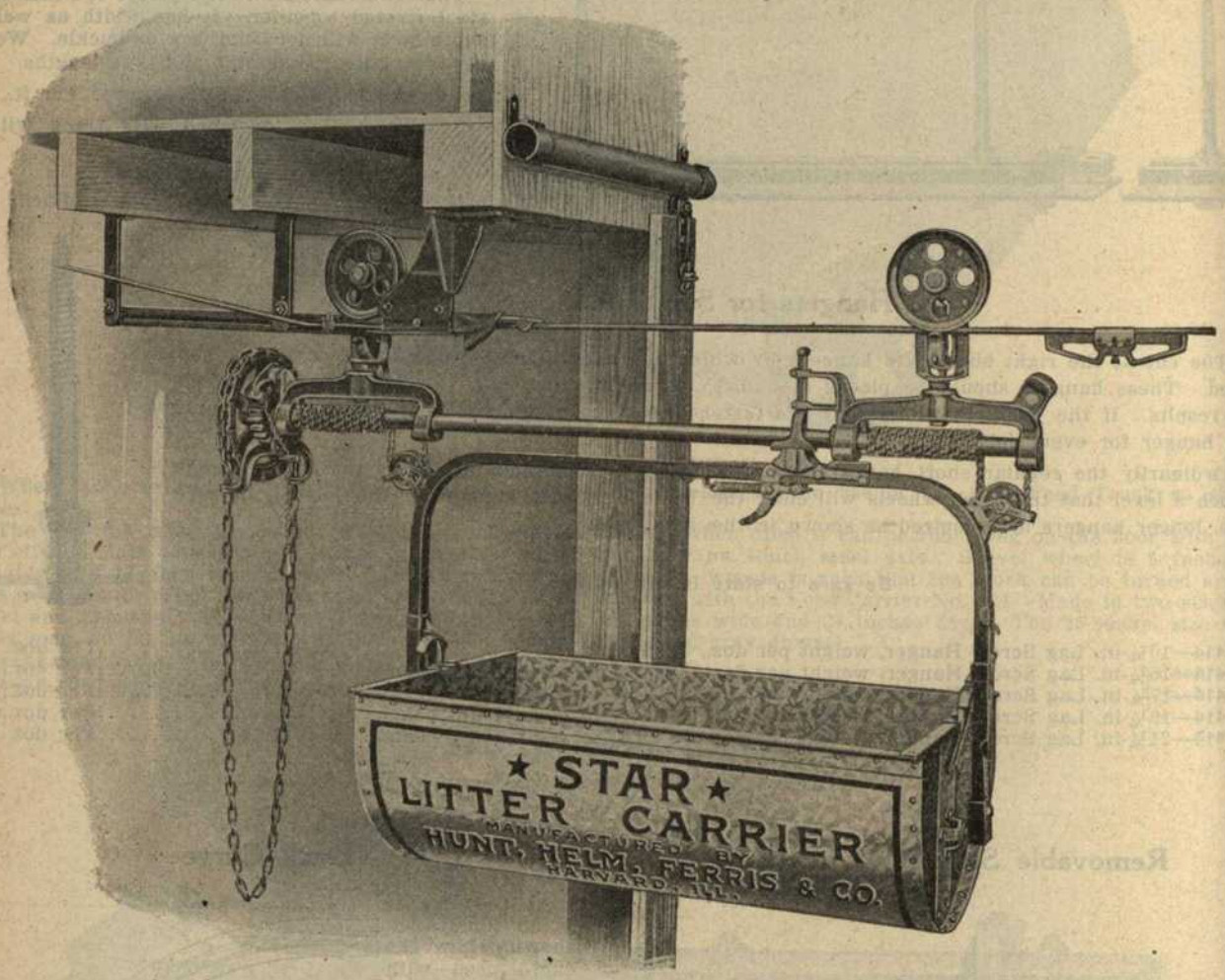
Two-way Switch, weight 26 lbs.....Each, 9.00
Three-way Switch, weight 29 lbs.....Each, 10.80

Wall Bracket

No. 361—For supporting end of track outside of barn as shown in cut of removable section. Weight, 6 lbs. .....Each, 2.40

No. 592 Star Ridg-Rod Litter Carrier

FOR RIGID TRACK INSIDE AND ROD TRACK OUTSIDE.



The Ridg-Rod Litter Carrier is used where the returning feature of the Rod Track Carrier and the inside adaptability of the Rigid Track Type is desired.

This carrier can be successfully installed in any barn no matter how complicated and regardless of the number of curves or switches required.

With a shove of the car at the barn door, it runs out, dumps at the proper point and returns automatically.

The track wheels are 7 inches in diameter with lathe turned tread and revolve on cold rolled steel bearings so that the carrier runs smoothly and easily.

The tripping device is so constructed that as soon as it hits the trip block it automatically releases the double latches and unlocks the tub at the bail. This device locks and unlocks the tub at both ends in unison.

Tub is made of heavy galvanized steel. Heavily reinforced at top and ends. Measures 26x41 inches and is 14 inches deep. When dumped these tubs are self-cleaning on account of the rounding bottom, which permits of no corners in which litter can collect.

There are other combination rigid and rod track carriers on the market, but they have drawbacks which decidedly offset their advantages. The Star Double Oval Rigid Track makes a smooth connection with the Rod Track and they line up perfectly. This makes it unnecessary for the operator to slow up the carrier at the joint. This is the very place where the car should have most momentum, and with the Star Ridg-Rod outfit the operator need not bother at all about the joint for the carrier goes over it perfectly smooth and without any danger of jumping the track. Equipped with enough chain to lower 7 feet.

The Star Ridg-Rod has a direct, uninterrupted run from the Star Double Oval Edge Rigid Track to the Rod Track. This straight run enables the operator to give the carrier sufficient momentum to make it run clear to the trip block, dump itself and return, all with one move.

Weight complete, 150 lbs.

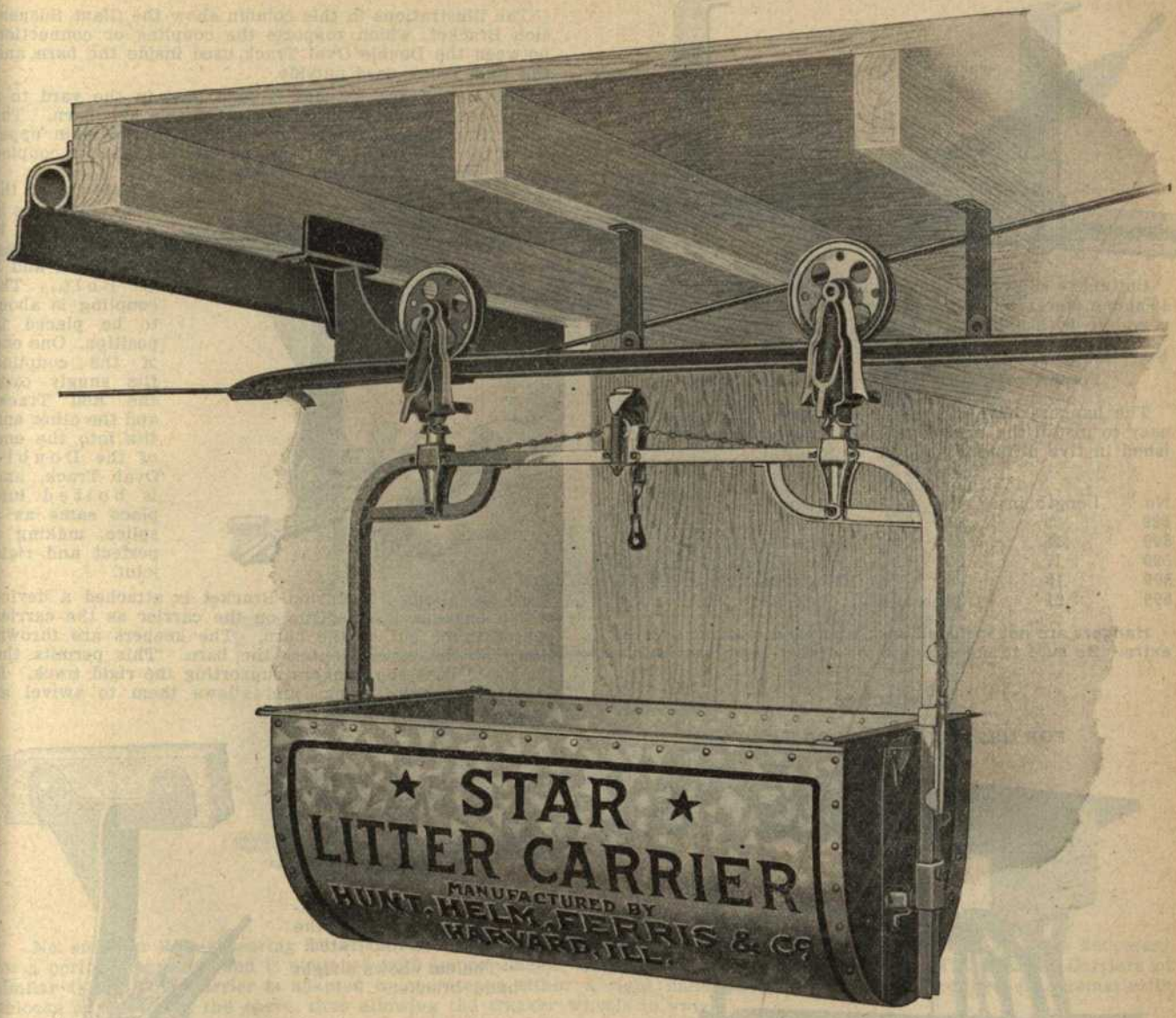
All steel and malleable parts finished in gray enamel. Tub is galvanized.

No. 592—Ridg-Rod Carrier with 6-bu. tub.....Each, 51.00

For Double Oval Track and Hangers and No. 0000 Rod Track for use with this Carrier, see following pages.

No. 693 Star Ridg-Rod Litter Carrier

FOR RIGID TRACK INSIDE AND ROD TRACK OUTSIDE.



The above cut shows No. 693 Star Roller Bearing Litter Carrier which operates on rigid double oval steel track inside the barn and rod track outside. Similar to No. 592 except does not have the raising and lowering feature.

It may be given a shove at the barn door and will run out, dump and return automatically to the door.

The tub may be hung in the bail at three different heights to suit the convenience of the one who cleans the barn. It is made of heavy galvanized steel, heavily reinforced at top and ends. Measures 26x41 inches and is 14 inches deep and is so shaped that it is self-cleaning when dumped.

As the tub locks at both ends, it is held absolutely rigid. Both locks let go at the same time when the latch trip, fastened to the top of the bail, strikes the trip block and the tub dumps either way. The trip block may be located any place along the rod track

The swivel trucks are provided with spring keepers which are automatically thrown up into place as the carrier leaves the barn. These absolutely prevent the carrier from jumping the track and also rigidly lock the wheels in line with the track and prevent their binding.

As the carrier returns again into the barn, these keepers are automatically thrown down to permit the operation of the carrier on the rigid steel track and to allow the carrier to pass the hangers, supporting the track. This also unlocks the swivel truck so that the carrier will readily pass the curves and switches.

The tracker wheels are 7 inches in diameter. They have a lathe-turned tread and revolve on cold-rolled steel bearings so that the carrier runs smoothly and easily.

The support for the wheel frame is riveted to both bail and bail brace, forming a rigid truss.

The bail being made of heavy channel steel and being fitted with braces of the same design, is especially strong and rigid. It prevents the tub from being strained or racked.

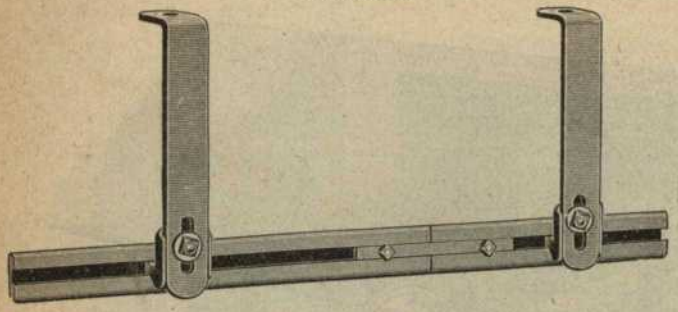
All steel and malleable parts finished in gray enamel. Tub is galvanized. Weight complete, 110 lbs.

No. 693—Ridg-rod Carrier with 6 bu. tub ..... Each, 30.00

For Double Oval Rigid Track and Hangers and No. 0000 Rod Track for use with this Carrier, see following pages.

Star Double Oval Track

FOR USE INSIDE THE BARN WITH RIDG-ROD CARRIER



Cut above shows Star Double Oval Steel Track. Made of 16-gauge steel. This is furnished in sections 10 feet long, complete with splices. Weight per 100 feet. 75 lbs.

Star Double Oval Track.....Per ft.. .19½

For price on 0000 Rod Track see next page.

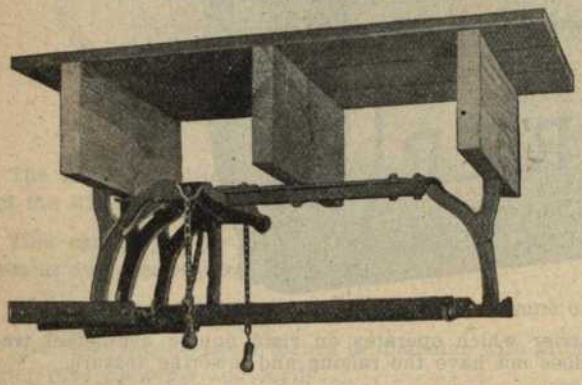
The hangers have a slot for adjusting which makes it easy to install the track and keep it level. Hangers furnished in five different lengths, as follows:

No.	Length ins.	Wt. per doz., lbs.	Clears	Per doz.
599	9	14	.....	3.30
599	15	20	6-inch Beam.....	4.05
599	17	23	8-inch Beam.....	4.35
599	19	26	10-inch Beam.....	4.50
599	21	29	12-inch Beam.....	4.80

Hangers are not included with track and must be ordered extra. Be sure to state length wanted.

Switches

FOR USE WITH RIDG-ROD TRACK



The Three-way Switch shown is operated by a pull of the chain as illustration will show. It locks into position automatically. It is so constructed that it is impossible for the Carrier to run off the track even if the switch might not happen to be in proper position. Furnished also for switching two ways in place of three.

No. 597—Three-way Switch, weight 35 pounds. Each, 10.80
No. 598—Two-way Switch, weight 30 pounds...Each, 9.00

Furnished either right or left-hand. See note under Suspension Brackets.

Track Curve

Illustration above shows the curve used in connection with Star Double Oval Track. Weight 15 lbs.

Each curve has five malleable brackets riveted to it for attaching the hangers. Hangers are not included with curve.

No. 83—Curve only, without hangers..... 1.95

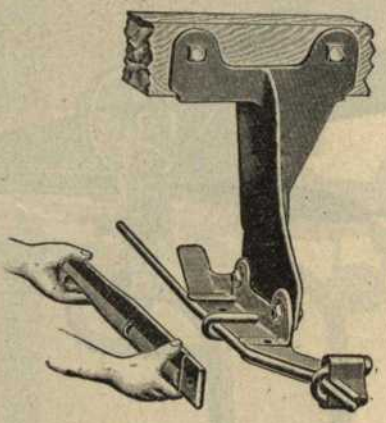
Giant Suspension Bracket

FOR USE WITH RIDG-ROD TRACK

Furnished either right hand or left hand.

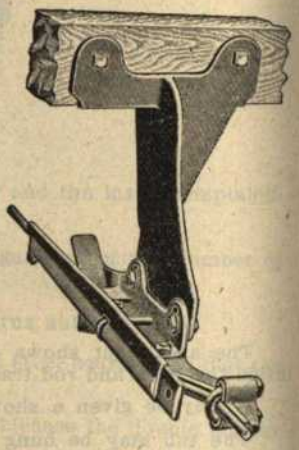
The illustrations in this column show the Giant Suspension Bracket, which supports the coupling or connection between the Double Oval Track used inside the barn and the Rod Track used outside.

The Rod Track extends from a post in the yard to a secure anchorage five or six feet inside the barn. The Giant Suspension Bracket is fastened to the main upper sill of the barn in the doorway and the Rod Track is coupled to the Double Oval Track at this point.



Note how the Rod Track sets in a groove and is held in place by a Hook Bolt and a U Bolt. The coupling is about to be placed in position. One end of the coupling fits snugly over the Rod Track, and the other end fits into the end of the Double Oval Track, and is bolted into place same as a splice, making a perfect and rigid joint.

To the Giant Suspension Bracket is attached a device which engages the keepers on the carrier as the carrier passes in or out of the barn. The keepers are thrown down as the carrier enters the barn. This permits the trucks to pass the hangers supporting the rigid track. It also unlocks the trucks and allows them to swivel at curves.



This cut shows the coupling in place.

The rigid track attaches to the end of the short piece illustrated.

The cut shows a right hand bracket.

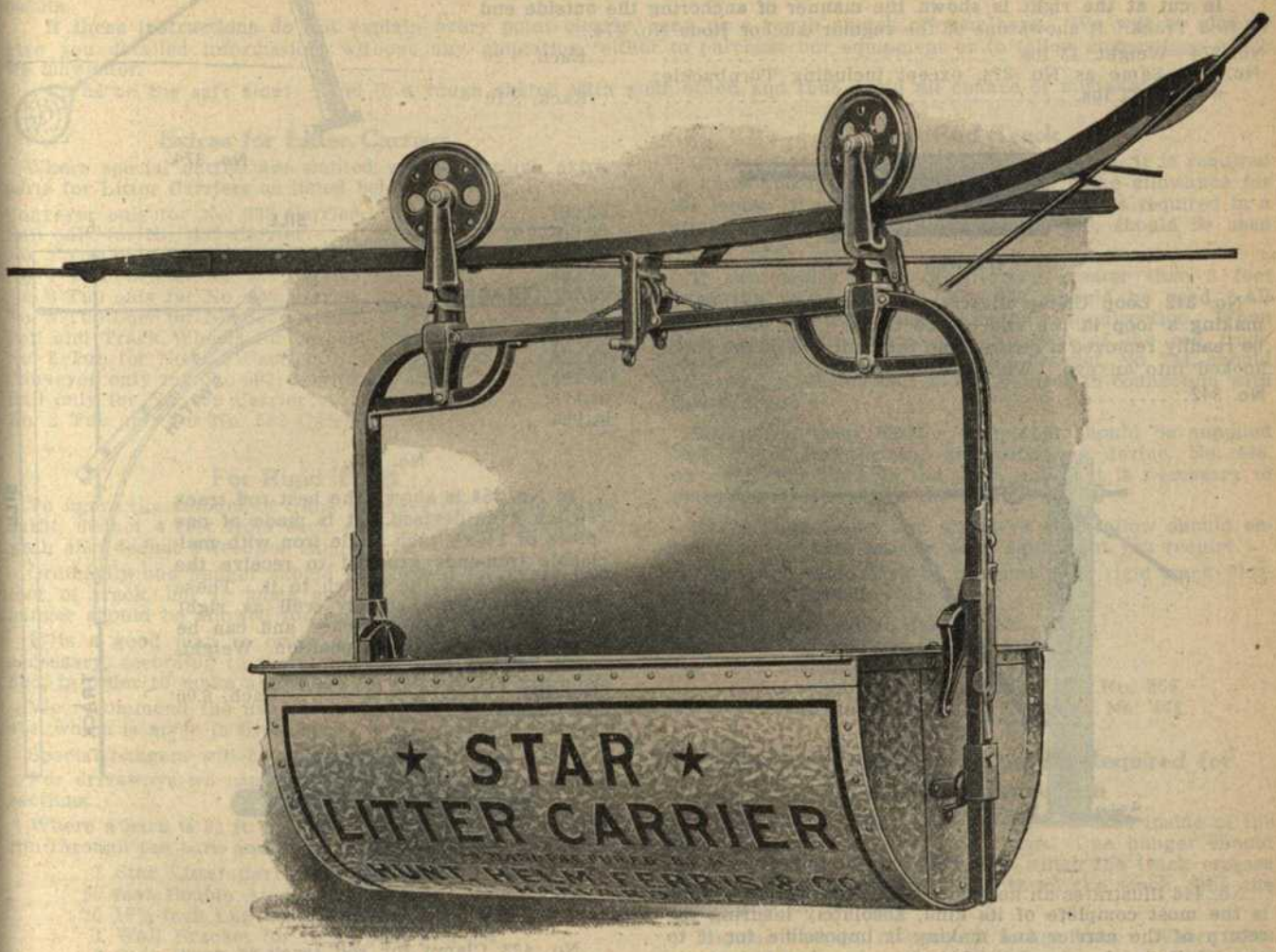
As the carrier leaves the barn, the keepers are engaged by the device attached to the Suspension Bracket and are thrown into place, so that the wheels cannot jump the track. This operation also locks the wheels into line with the track; it keeps them from binding, and reduces friction to a minimum. This Suspension Bracket and coupling used with it produce a straight, smooth run from barn to dump. There is no off-set at the barn door where the rod and rigid track join. This patented feature at last solves the problem of a smooth connection at the door. This makes it possible to gather headway with the loaded carrier before it is given the final shove that sends it out to the dump. Weight, 14 lbs.

With each Suspension Bracket we regularly include 3 ½x5 Lag Screws for attaching to beam.

No. 594—Giant Suspension Bracket, right hand..Each, 6.60
No. 702—Giant Suspension Bracket, left hand...Each, 6.60

Right hand should be ordered where the bracket is on the right side of the track, when standing under the bracket looking outside of the barn. Illustration above shows right hand. Left hand is just opposite.

No. 405 Star Litter Carrier



No. 405 Star Roller Bearing Litter Carrier for Rod Track, combines all the desirable and essential features necessary for a perfect conveyor, and is equipped with improvements that place it at the head of all Rod Track Litter Carriers of similar type. This Carrier is adapted to operate on either a right hand or left hand curve, the keeper automatically unlocks as it strikes the curve, thus allowing the tracker wheels to swivel.

The track wheels are 7 inches in diameter with lathe turned tread and revolve on cold rolled steel bearings so that the carrier runs smoothly and easily.

When the tracker wheels leave the curve and strike the main track again, the wheels will be locked rigid and parallel with the rod track, thus overcoming any tendency to run sideways and bind.

The bail provides for three adjustments, thus lowering and raising the tub to the desired height.

The All-steel Tub dumps either way, locks and unlocks at both ends simultaneously, and thus holds absolutely rigid. It is practically impossible for this Carrier to jump the track.

In operation the Carrier is automatic. By putting up the rod at the proper angle the Carrier, when loaded, can be made to run out and dump at the desired point by simply giving it a vigorous shove. When dumped, the Carrier returns to the barn automatically.

The tub is made of heavy galvanized steel. Heavily reinforced at top and ends. Measures 26x41 inches and is 41 inches deep. Holds approximately 6 bu. The tub of the carrier is dumped by means of a trip block, which can be placed at any desired point on the track. Weight of No. 405 Carrier, complete, 110 lbs.

All steel and malleable parts are finished in gray enamel. Tub is galvanized.

No. 405—Carrier.....Each, 30.00
No. 0000—Rod Track.....Each, 6.00

No. 4050 Litter Carrier Outfit

This outfit consists of one No. 405 Litter Carrier, 100 feet No. 0000 Rod Track and one 30-inch Tension Bolt for tightening the track.

This makes a complete Litter Carrier Outfit that is sufficient for the average job. Can be installed either in new or old barns.

No. 4050—Litter Carrier Outfit.....Each, 37.50

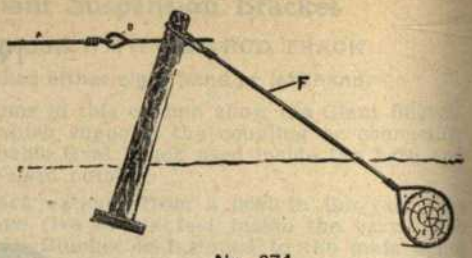
Rod Track Fixtures

For Price on Rod Track, see Preceding Page.

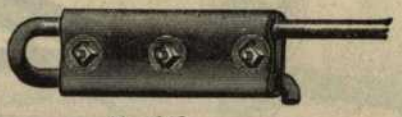
In cut at the right is shown the manner of anchoring the outside end of Rod Track. It shows one of the regular Anchor Rods No. 374.

No. 374—Weight, 13 lbs. ..... Each, 4.20

No. 353—Same as No. 374, except including Turnbuckle; weight, 33 lbs. ..... Each, 8.10



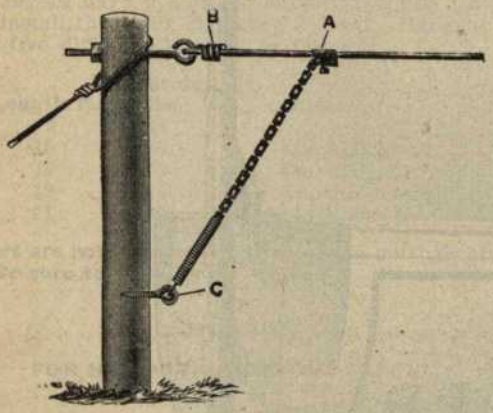
No. 374.



No. 342.

No. 342 Loop Clamp illustrates a desirable method of making a loop in the end of the track. The clamp can be readily removed if desired and the bent end of the track hooked into an eye. Weight each, 1¾ lbs.

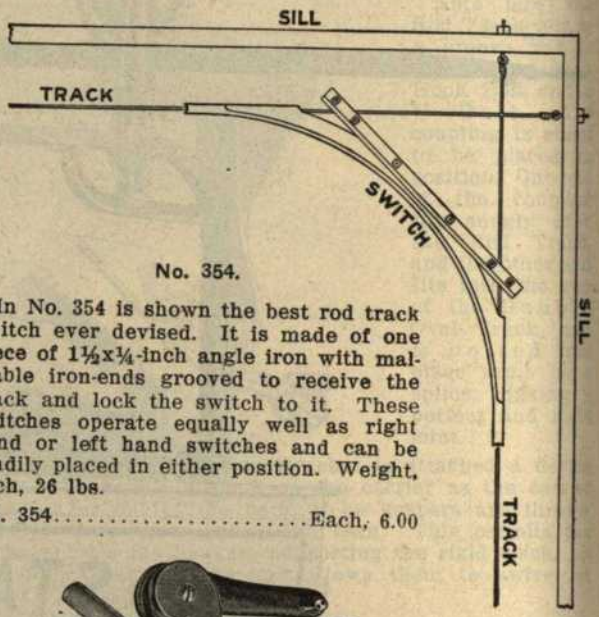
No. 342 ..... Each, .45



No. 446.

No. 446 illustrates an automatic stop and returner which **is the most complete of its kind, absolutely insuring the return of the carrier and making it impossible for it to** run off the track. Consists of chain and spring with clamp for track and screw eye for post. Weight, each, 3½ lbs.

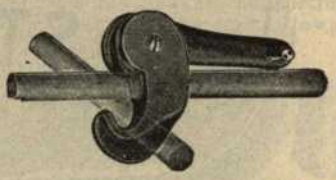
No. 446 ..... Each, 1.80



No. 354.

In No. 354 is shown the best rod track switch ever devised. It is made of one piece of 1½x¼-inch angle iron with malleable iron-ends grooved to receive the track and lock the switch to it. These switches operate equally well as right hand or left hand switches and can be readily placed in either position. Weight, each, 26 lbs.

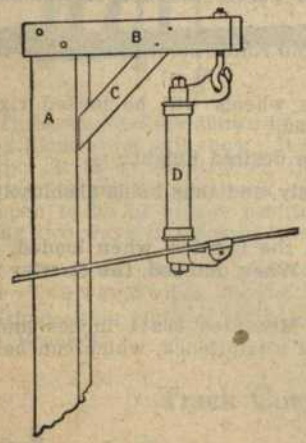
No. 354 ..... Each, 6.00



No. 423.

No. 423 Clamp for rod track is used for fastening two intersecting lengths of rod track together when desired. Weight, each, 5 ozs.

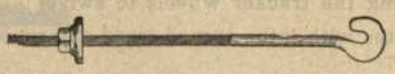
No. 423 ..... Each, .30



No. 340.

Part marked D illustrates the No. 340 Spring Track Support. When rod tracks of more than 125 feet in length are used we recommend the use of one Spring Track Support for every additional 50 feet of track. Weight, each, 8 lbs.

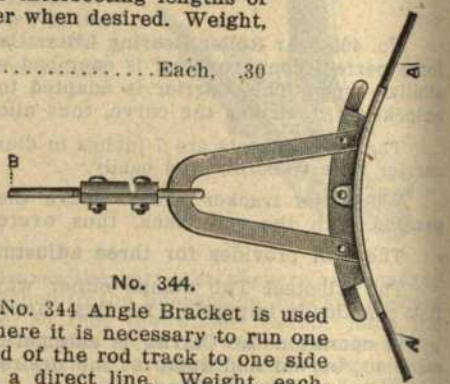
No. 340 ..... Each, 4.50



No. 364.

No. 364 illustrates the Tension Bolt, size 30x⅞-inch. For anchoring and tightening rod track. Weight, each, 6½ lbs.

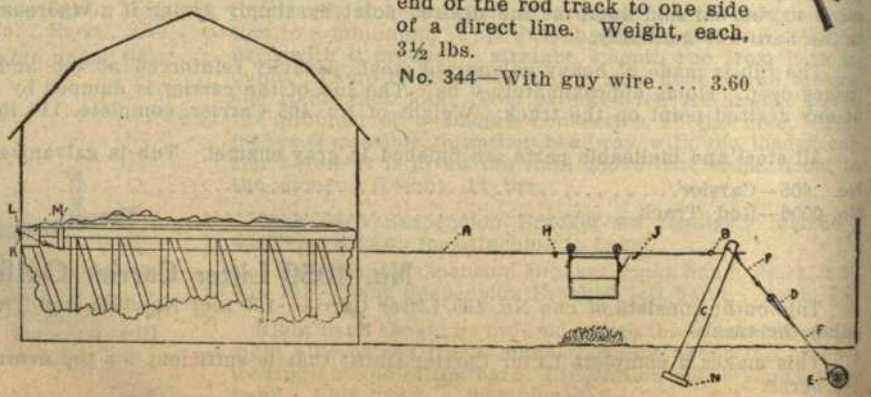
No. 364 ..... Each, 1.50



No. 344.

No. 344 Angle Bracket is used where it is necessary to run one end of the rod track to one side of a direct line. Weight, each, 3½ lbs.

No. 344—With guy wire 3.60



This shows attachments of a rod track in barn and in yard.

How to Figure Litter Carrier Equipment

Below are given instructions with illustrations showing how to figure the three different kinds of Star Litter Carrier outfits.

If these instructions do not explain every point clearly, send us a rough sketch of your barn. We will be glad to give you detailed information, without any obligation, either to purchase our equipment or to follow suggestions which we may offer.

To be on the safe side: Send in a rough sketch with your order, and thus avoid all chance of mistakes.

Extras for Litter Carriers

Where special outfits are wanted we can furnish extra parts for Litter Carriers as listed below.

Conveyor only for No. 333 Carrier	$30.00
Bail only for No. 333 Carrier	$12.50
No. 2 Tub only for No. 333 Carrier	$28.00
No. 4 Tub only for No. 333 Carrier	$33.50
No. 6 Tub only for No. 333 Carrier	$37.50
No. 8 Tub only for No. 333 Carrier	$42.00
Bail and Track Wheels for No. 405 Carrier	$24.00
No. 2 Tub for No. 405 Carrier	$25.50
Conveyor only for No. 592 Carrier	$33.50
Bail only for No. 592 Carrier	$11.40
No. 2 Tub only for No. 592 Carrier	$30.00

For Rigid Track

To figure the amount of track required for a rigid track outfit, deduct 4 feet from each end which runs toward a wall, also deduct 8 feet for each curve.

Ordinarily one hanger should be allowed for every two feet of track, but if joists are closer than 2 feet, one hanger should be allowed for each joist.

It is a good plan to order a few more hangers than necessary, according to the number of feet of track specified, in order to make allowance for curves and switches.

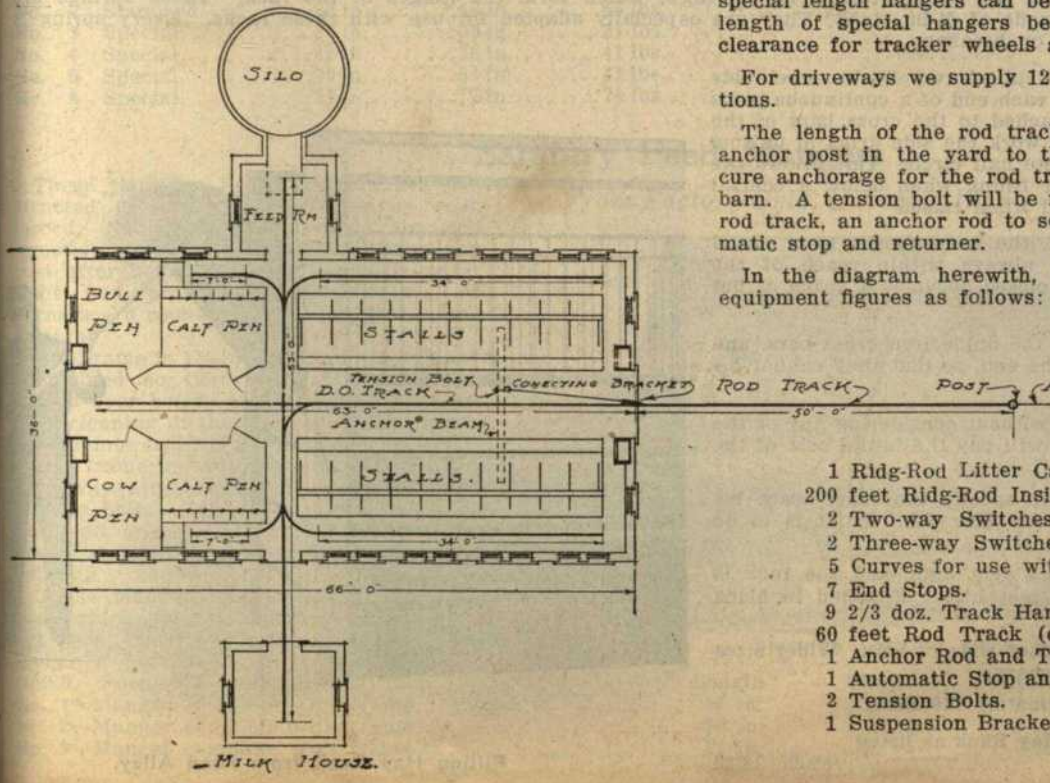
We recommend the use of our Lag Screw Hanger, No. 414, which is made in five sizes.

Special hangers will be furnished on special order.

For driveways we can supply 12 and 14-foot detachable sections.

Where a barn is 32 ft. long and to have a single straight run through the barn and 30 ft. outside, use the following:

1 Star Litter Carrier, No. 333.
60 feet Double Angle Steel Track.
20 10¼-inch Lag Screw Hangers, No. 414.
1 Wall Bracket for ridge pole, No. 361.
2 Stop Blocks for end of track.



For Rod Track

Give the outside dimensions of the barn. It is required to know the thickness of the wall to make allowance for the loops. If more than 125 feet of cable is required in a stretch, a spring track support, No. 340, should be used at the door.

If two cables cross at distance greater than 3 feet from the wall, a clamp, No. 423, should be used. All curves for rod track must be in the same direction. When it is desired to change the direction of the rod track at the door of the barn, the angle bracket, No. 244, should be used. A tension bolt should be used in connection with this bracket.

Every rod track carrier equipment should be supplied with the automatic stop and returning device, No. 446, for each trip block in the yard, unless it is necessary to place a cross track in the yard.

These suggestions and examples that follow should enable you to figure exactly what equipment you require.

Using the same barn as referred to in rigid track illustration use the following:

1 Star Litter Carrier, No. 405.
62 feet Rod Track, No. 0000.
2 Tension Bolts.
1 Anchor Rod and Turnbuckle, No. 353.
1 Automatic Stop and Returner, No. 446.

How to Figure the Equipment Required for Ridg-Rod Construction

To figure the double oval steel track used inside of the barn, deduct 8 feet for each curve. One hanger should be allowed for every joist under which the track crosses and a hanger every two feet where the track runs the same way as the joist.

Regular hangers measure 9 inches long. Where it is necessary to pass under a beam supporting the joists, special length hangers can be furnished. In figuring the length of special hangers be sure to allow 7½ inches clearance for tracker wheels above the track.

For driveways we supply 12 and 14-foot detachable sections.

The length of the rod track is the distance from the anchor post in the yard to the nearest point where secure anchorage for the rod track may be had inside the barn. A tension bolt will be required at each end of the rod track, an anchor rod to secure the post and an automatic stop and returner.

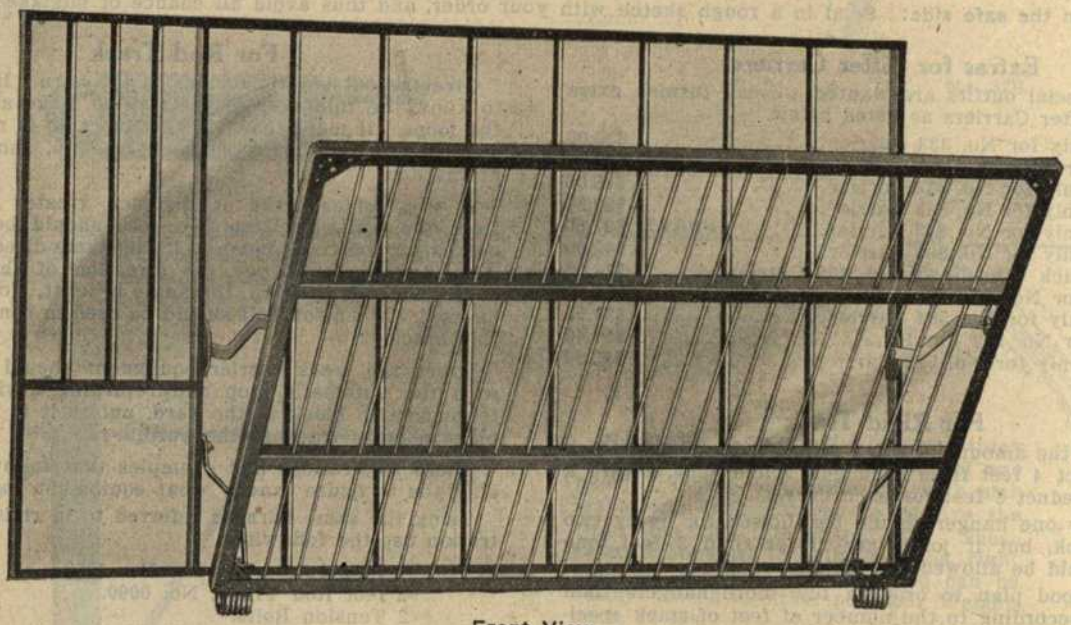
In the diagram herewith, for instance, the required equipment figures as follows:

1 Ridg-Rod Litter Carrier, No. 592.
200 feet Ridg-Rod Inside Track.
2 Two-way Switches.
2 Three-way Switches.
5 Curves for use with Switches.
7 End Stops.
9 2/3 doz. Track Hangers.
60 feet Rod Track (outside).
1 Anchor Rod and Turnbuckle.
1 Automatic Stop and Returner.
2 Tension Bolts.
1 Suspension Bracket.

Star Automatic Hay Racks

From Factory Only, Harvard, Ill.

With Stall Front.



Front View.

The Star Stall Front above shown is designed for front alley-way feeding. It fills the entire opening of the front of the stall. This does away with all wooden parts, as the stall front itself supports the hay rack.

The small opening at the lower corner is for feeding grain.

The upright rods in the Stall Front are spaced 6 inches apart, so the horse can reach the hay easily. At the same time, on account of the hay being constantly under pressure, it is not pulled out in bunches and wasted.

The main frame of these racks is constructed of 1x1-in. high carbon angle steel. The corners are formed rounding and are re-inforced by steel plates. The frame is also braced by angle iron cross bars and upright rods, which cannot possibly be drawn out of shape. This makes a very neat sanitary rack, and has the strength and rigidity to withstand rough usage.

Every rack is fitted with two special tortion coil springs, which form the hinges of the rack. These springs are 2 7/16 ins. in diameter, and made of 3/8-in. steel. They are especially adapted for use with these racks. Every spring is guaranteed against defect or breakage.

The locking device consists of two 1¼-in. steel side arms, operating in links at each end of a continuous piece of cold rolled shafting, attached to the cross bars of the frame. These links, which work the side arms in unison, operate and make a complete half circle. This allows the rack to be locked open for filling when below a central point and completely closed when raised.

As the hay is consumed, the front moves to a closed position, keeping the hay always within reach of the animal, and when entirely closed occupies a space of but three inches.

The rods extend through the angle iron cross bars, and are electrically welded at the end, so that they cannot become detached.

The saving of hay alone, without considering any of the other features in this rack, will pay the initial cost of the installation in a short time.

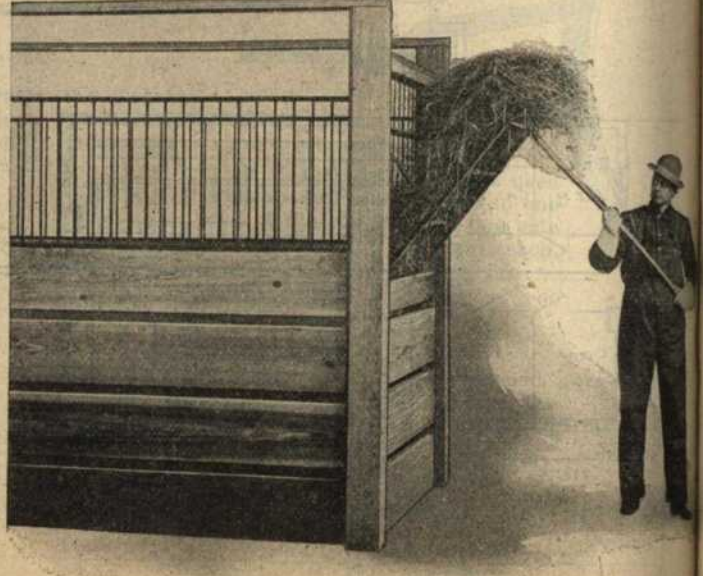
When ordering, be sure to specify the exact space between the posts to which the Star Stall Front is to be attached.

The Stall Front itself is 3 feet high, and the rack is 3 feet 6 inches wide by 3 feet high. Finished in black Japan.

Regularly furnished 54 inches wide or less. Wider sizes furnished at an additional charge.

Weight complete, approximately 110 lbs.

No. 749. Stall Front with Hay Rack as listed above . . . . . Each, 18.20

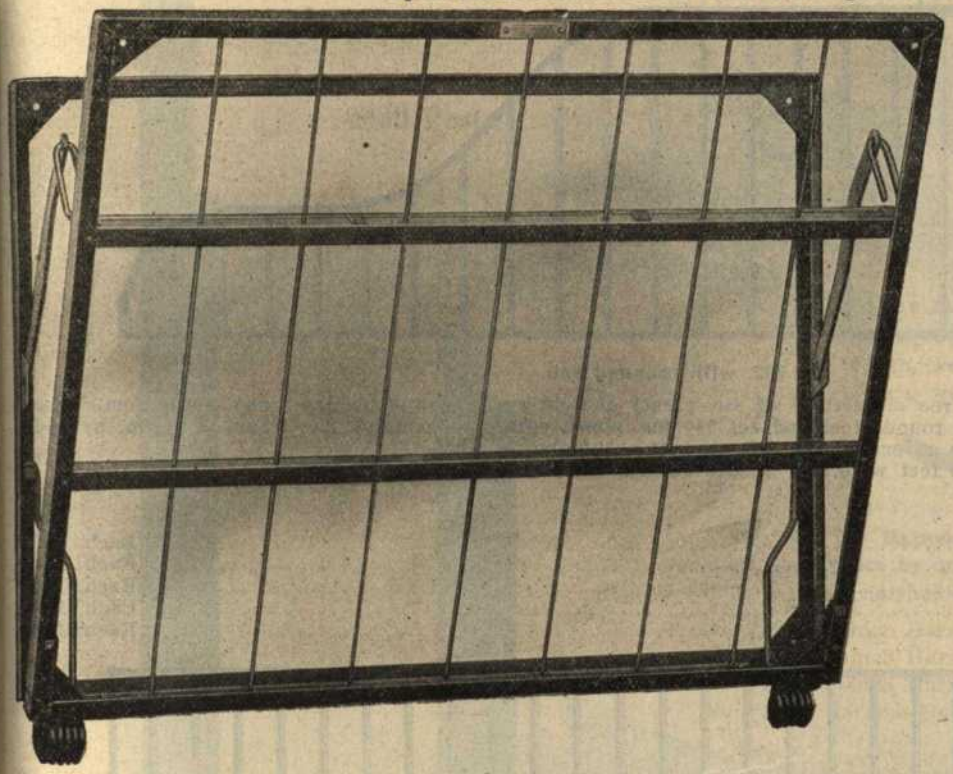


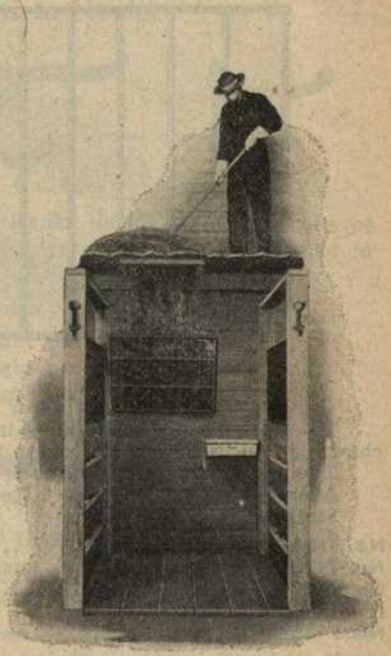
Filling Hay Rack from Feed Alley.

Star Automatic Hay Racks—Continued

From Factory Only, Harvard, Ill.

Open Back Construction. For Use Against Wall.





Feeding from the loft

The pattern of rack listed above is for use when the manger is to be attached to the walls of the barn. The upright wiring in the back of the rack is omitted, so that the hay will not accumulate between the wall and the back of the rack.

This construction is desirable when the hay is to be fed from the rear of the stall or from the loft, as shown in the above cut. In this case the animal feeds through the front of the rack, and the wiring is spaced accordingly.

The action of the front of the rack is the same as described on preceding page.

When these racks are to be used on pens, etc., where there is no solid back for the rack, then we can furnish the back with close wiring, as shown on preceding page.

We can furnish this in several sizes as listed below. All finished in Black Japan.

	Height.	Width.	Weight.	With Upright Wiring in Back	Open Back as Illustrated
No. 1 Standard	36 in.	42 in.	40 lbs.	11.55	10.20
No. 2 Standard	36 in.	48 in.	45 lbs.	12.30	10.95
No. 3 Special	36 in.	36 in.	37 lbs.	10.95	9.60
No. 4 Special	42 in.	36 in.	41 lbs.	11.55	10.20
No. 5 Special	30 in.	54 in.	44 lbs.	11.55	10.20
No. 6 Special	36 in.	72 in.	74 lbs.	19.20	16.50

Sanitary Feed Mangers

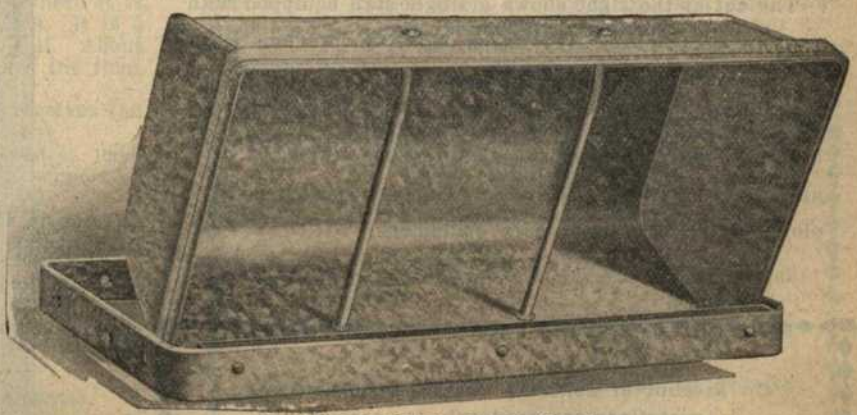
From Factory Only, Harvard, Ill.

These Sanitary Feed Mangers are constructed of 18-gauge steel, heavily re-inforced. No rivets are used in the construction of the manger itself. It is galvanized after being made up, hence is watertight and practically indestructible. All corners are rounded, so the manger is self-cleaning.

The frame is 1½-in. steel, and the manger is pivoted so that it can be completely turned over before each feeding. This permits cleaning of the manger of dirt or sour feed before fresh grain is placed in it.

The frame in which the manger sets may be easily attached to the walls by heavy lags or bolts. The back of the frame and one end are secured to the stall, and a heavy steel brace supports the unfastened corner.

These mangers are equipped with cross bars which prevent the waste of feed and act as a check on too rapid eaters. This means a big saving of grain. Galvanized finish. Furnished in three sizes.

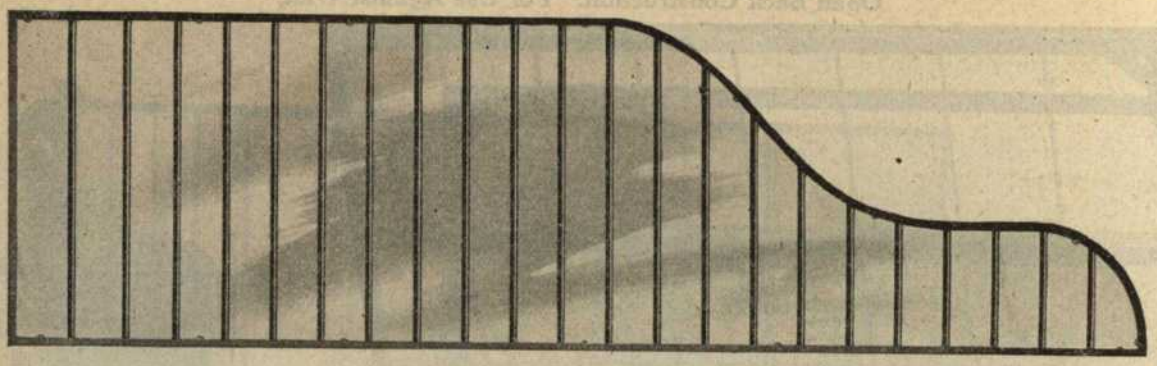


Showing position when tilted.

	Length	Width	Depth	Weight each	Each
No. 1—Manger complete with frame	20 in.	12 in.	7 in.	20 lbs.	7.80
No. 2—Manger complete with frame	20 in.	13 in.	9 in.	22 lbs.	8.80
No. 3—Manger complete with frame	14 in.	12 in.	7 in.	14 lbs.	6.90

Star Steel Stall Guards

From Factory Only, Harvard, Ill.



No. 742, with rounded end.

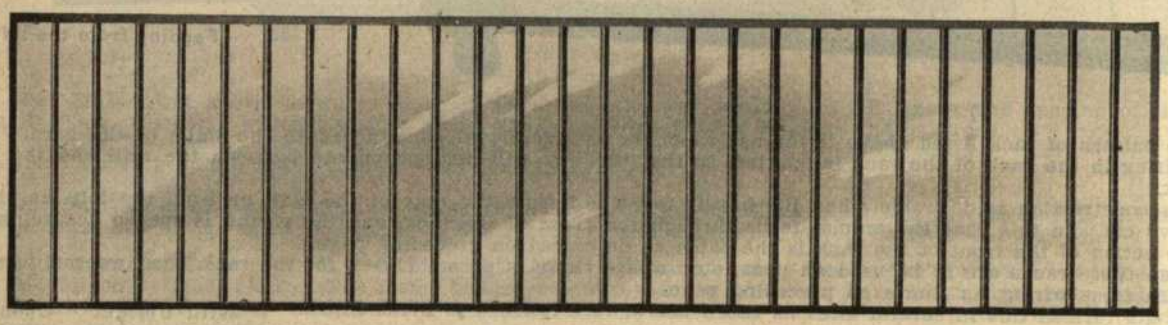
The Steel Stall Guards allow free circulation of air, plenty of light and at the same time keep the animals apart. The uprights are made of ½-in. round steel and set 3½ ins. apart, center to center. The frame is 1¼-in. by ½-in. channel steel, with a plate on top to cover the rail and prevent accumulations.

The main part of the frame is 2 feet wide and we can furnish in 5, 6, 7, 8 and 9-ft. lengths.

Average weight, per foot, 6 lbs.

Finished in Black Japan.

No. 742A, 5 ft. long.....Each, 8.10
No. 742B, 6 ft. long.....Each, 9.60
No. 742C, 7 ft. long.....Each, 11.10
No. 742D, 8 ft. long.....Each, 12.45
No. 742E, 9 ft. long.....Each, 13.95



No. 743, with square end.

The Steel Stall Guard shown above is to be used either with box stalls or single stall. It is constructed exactly the same as the No. 742, except it does not have the rounded end. It is 2 feet high and we can furnish any desired length.

Average weight, per foot, 6 lbs.

Finished in Black Japan.

No. 743. Stall Guard, 2 ft. high.....Per linear foot, 1.50

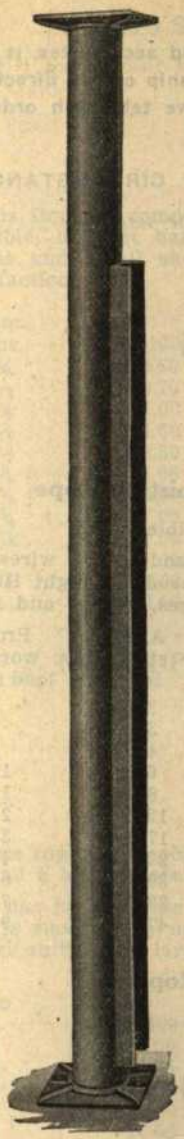
The cut at the right shows a single stall equipped with one of the open-back Hay Racks shown on previous page, a sanitary Feed Manger, square-end Stall Guards and Star Harness Hooks. The horse kept in such quarters will undoubtedly give better service than the one stabled in dark unsanitary quarters. No modern up-to-date barn is complete without this horse barn equipment.

On account of abnormal market conditions, all quotations are good only for prompt acceptance and prices subject to change without notice.

Star Stable Fittings

From Factory Only, Harvard, Ill.

Stall Posts



No. 733.

No. 732.

These posts are made of wrought steel tubing, to which are attached heavy galvanized channels 2x1¾ inches. These channels are attached to the post by countersunk set screws, and the back of the channel is rounded to conform to the shape of the post, making a neat and sanitary construction.

No. 732 style is 3½ inch tubing and is used where it is not necessary to support the loft on these posts. It is 5 ft. 6 ins. high, not including the ornamental ball. About 16 ins. of this post is supposed to extend below the floor line to provide a secure anchorage.

The 4-ft. channel extending above the floor receives the 2-in. planks, which form the stall partition.

No. 733 is a regular 4-inch Star Column and is used where the posts extend to the ceiling for the support of overlays, etc.

The channel is attached in the same way as on the No. 732, but because of the height a 6-ft. channel can be used if desired.

All posts are finished in gray enamel, thoroughly baked on.

No. 732 Post, complete as illustrated, weighs approximately 50 lbs. Channel iron weighs approximately 3 lbs. to the foot.

No. 732 Post, complete with channel and ornamental ball.....Each, 7.20
No. 733 Steel Post only (length according to height of ceiling).....Per foot, 1.20
4-ft. Channel Iron attached to No. 733 Posts....Each, 1.80
6-ft. Channel Iron attached to No. 733 Posts....Each, 3.00
Caps or Bases for No. 733 Posts.....Each, .60

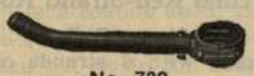
Harness Hooks

No. 729.

The No. 729 Harness Hooks listed above are made of cast iron, extra heavy and very serviceable. Finished in Black Japan.

We can furnish in three sizes:

8-inch, weight per dozen 36 lbs.
10-inch, weight per dozen 60 lbs.
13-inch, weight per dozen 84 lbs.

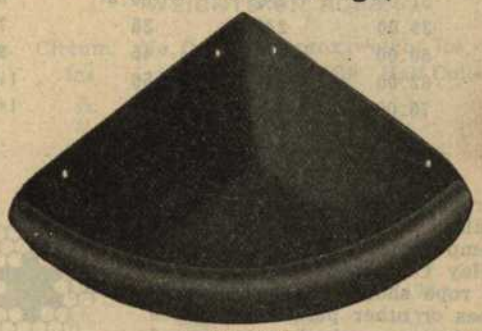


No. 730.

The No. 730 Harness Hook is built to attach to 4-in. Star Stall posts by means of a malleable clamp. This hook is nicely finished in gray enamel. Weight each, 4 lbs.

No. 729A— 8-inch Harness Hook.....Per doz., 4.80
No. 729B—10-inch Harness Hook.....Per doz., 7.20
No. 729C—13-inch Harness Hook.....Per doz., 10.05
No. 730 —Harness Hook.....Per doz., 21.60

Corner Feed Manger



No. 731.

The Star Corner Feed Manger shown above is made of cast iron, 9 inches deep, 17 inches on each side. The front edge is neatly rounded and flanged.

Weight, 35 lbs. Finished in gray enamel.

No. 731—Star Corner Feed Manger.....Each, 4.50

We can also furnish many other items of equipment for Horse or Dairy Barns on special order. Send in a rough sketch of the barn and we'll be glad to help you work out the definite plans and furnish estimate of cost.

Wire Rope

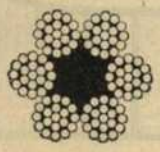
On account of the great number of sizes and lengths and the different kinds of wire rope and accessories, it is impossible for us to maintain in our warehouse a complete stock, therefore we reserve the right to ship orders direct from factory. Factory is located in St. Louis and shipments are made promptly. In urgent cases we telegraph orders at our own expense. However, we carry in stock the rope most commonly used.

WIRE ROPE CUT TO LENGTH CANNOT BE TAKEN BACK OR EXCHANGED UNDER ANY CIRCUMSTANCES

In ordering Wire Rope, be sure to specify the purpose for which it is to be used.

HERCULES WIRE ROPE

Made Only by A. Leschen & Sons Rope Co.



Hercules Red-Strand Rope

For Stump Pullers.

This Rope is made with 6 strands of 19 wires each, laid around a hemp center. It is especially adapted for stump pulling, steam shovels, dredging, mine hoists and all heavy duty work. Flexible.

Diam. ins.	Per 100 ft.	Circum. ins.	Approx. strength in tons	Proper working load in tons
¼	13.00	¾	3.15	.63
5/16	13.50	1	4.50	.9
⅜	14.50	1⅛	6.75	1.35
7/16	15.50	1¼	9.4	1.9
½	17.00	1½	12.1	2.4
⅝	22.50	2	19	3.8
¾	31.00	2¼	26.3	5.3
⅞	39.00	2¾	35	7
1	50.00	3	45	9
1⅛	62.00	3½	56	11
1¼	75.00	4	69	14

No. 257 Cast Steel Hoisting Rope

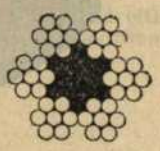
Formerly called "Crucible Cast."

This Rope is composed of 6 strands of 19 wires each, laid around a hemp center. It is used for Light Hoisting Purposes in Mines, Quarries, Dredges, Cranes and Alfalfa Hay Stackers. Very flexible.

Diam. ins.	Per 100 ft.	Circum. ins.	Approx. strength in tons	Proper working load in tons
¼	9.00	¾	2.2	.44
5/16	9.25	1	3.1	.62
⅜	9.50	1⅛	4.8	.96
7/16	10.00	1¼	6.5	1.30
½	11.00	1½	8.4	1.68
⅝	14.00	2	12.5	2.5
¾	19.00	2¼	17.5	3.5
⅞	24.00	2¾	23	4.6
1	31.00	3	30	6
1⅛	38.00	3½	38	7.6
1¼	46.00	4	47	9.4

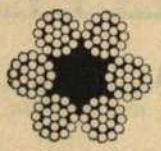
No. 287 Galvanized Iron Rope

This rope is composed of 6 strands, 7 galvanized iron wires to the strand, with hemp center. Used for Derrick Guys, Hay Carrier Track, etc. Galvanized rope should be used only as guy ropes or other permanent places where it is not required to go around sheaves.



Diam. ins.	Per 100 ft.	Circum. ins.	Approx. strength in tons.	Circum. of equal manila rope, ins.
5/16	3.50	1	1.42	2
⅜	4.50	1⅛	1.95	2¼
7/16	5.00	1¼	2.35	2½
½	6.00	1½	3.39	3
⅝	8.00	2	5.7	4½
¾	9.00	2¼	7.8	4¾
⅞	11.00	2½	9.4	5
⅞	13.00	2¾	11.1	5¼
1	15.00	3	14.1	5¾

No. 256 Iron Rope



For Agricultural purposes. Made of 6 strands of 19 wires each with heavy hemp center. Used for Elevators, Hay Tools, Hay Stackers, or any light hoisting purpose. Very flexible.

Diam. ins.	Per 100 ft.	Circum. ins.	Approx. strength in tons	Proper working load in tons
¼	6.50	¾	1.1	.22
5/16	6.75	1	1.5	.30
⅜	7.00	1⅛	2.4	.48
7/16	7.50	1¼	2.9	.58
½	8.50	1½	3.9	.78
⅝	12.00	2	6	1.20
¾	16.00	2¼	8.5	1.70
⅞	20.00	2¾	11.8	2.36
1	26.00	3	14.5	2.90
1⅛	33.00	3½	18.6	3.72
1¼	40.00	4	22.8	4.56

No. 297 Galvanized Wire Strand

Made of 7 galvanized steel wires twisted into a single strand. It is used for Smoke Stack Guys, Hay Carrier Track, and especially adapted for Silo Guys and Silo Hoops.

Diam., ins.	Per 100 ft.	Seven wires No.	Approx. wt., 1000 ft., lbs.
¼	1.75	14	125
5/16	2.50	12	210
⅜	3.50	11	295
7/16	4.50	10	415
½	5.50	8	510

Larger sizes of rope of all kinds on application.

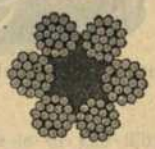
WIRE ROPE—Continued

No. 619 Special Steel Wire Rope

This Rope is composed of 6 strands of 19 wires each. Flexible, but yet has great strength. Can be used on drums and small sheaves for medium work with good satisfaction.

Diam., ins.	Per 100 ft.	Circum. ins.	Approx. strength in tons	Proper working load in tons
¼	10.50	¾	2.43	.49
5/16	10.75	1	3.5	.7
⅜	11.00	1⅛	5.3	1.06
7/16	11.50	1¼	7.25	1.45
½	12.50	1½	9.2	1.84
9/16	14.00	1¾	11.2	2.24
⅝	16.50	2	14.	2.8
¾	22.00	2¼	20.2	4.04
⅞	29.00	2¾	26.	5.2
1	37.00	3	34.	6.8
1⅛	46.00	3½	43.	8.6
1¼	56.00	4	53.	10.6

No. 471 Plow Steel Hoisting Rope

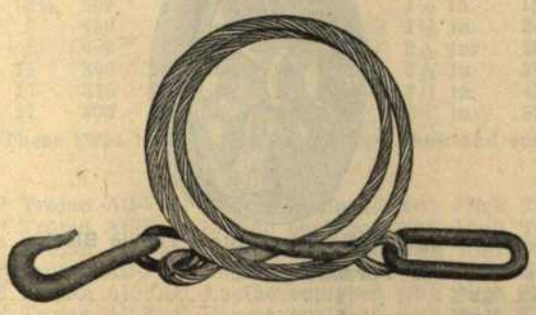


This rope is composed of 6 strands of 19 wires each, laid around a hemp center, making a rope of 114 wires.

It has high tensile strength and resistance to abrasion and is successfully used for heavy work under conditions where sufficiently large drums and sheaves are practicable.

Diam. ins.	Per 100 ft.	Circum. ins.	Approx. strength in tons	Proper working load in tons
¼	12.00	¾	2.65	.53
5/16	12.25	1	3.8	.76
⅜	12.50	1⅛	5.75	1.15
7/16	13.00	1¼	8	1.6
½	14.00	1½	10	2
9/16	16.00	1¾	12.3	2.4
⅝	19.00	2	15.5	3.1
¾	26.00	2¼	23	4.6
⅞	34.00	2¾	29	5.8
1	43.00	3	38	7.6
1⅛	54.00	3½	47	9.4
1¼	65.00	4	58	12

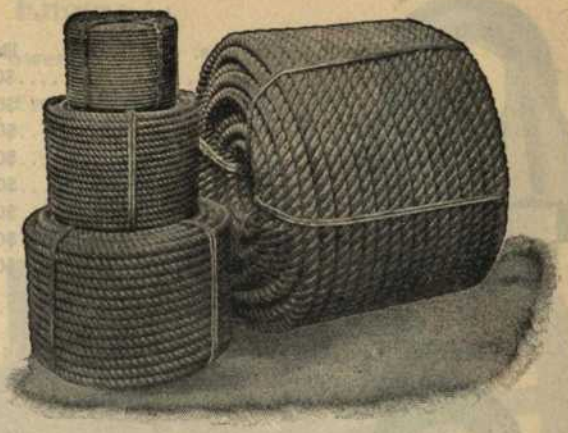
Steel Pulling Cables



A most useful article for the threshermen in getting out of bad places when on the road or in case of fire. Made of the very best grade of ⅝-in. or ¾-in. cast steel wire rope consisting of 6 strands of 7 wires each, 60 feet long.

⅝-inch x 60-ft. Weight 43 lbs.....Each, $22.50
¾-inch x 60-ft. Weight 75 lbs.....Each, $31.00

MANILA AND SISAL ROPE



Price is Market Value on Date of Shipment.

Full Coils of ½-inch contain about 1200 feet, and smaller sizes longer. All Half Coils contain about 600 feet. ¼, 5/16, ⅜, 7/16 and ½-inch put up in full coils only; larger sizes put up in both full and half coils.

In Stock, the following sizes:

Blue Heart Manila, ¼, ⅜, ½, ⅝, ¾, ⅞, 1, 1¼, 1½ and 2-in.
Anchor Manila, ¼, ⅜, ½, ⅝, ¾, ⅞ and 1-inch.
Red Heart Sisal, 5/16, ¼, ⅜, 7/16, ½, ⅝, ¾, ⅞, 1-in.
Tenex Sisal, ¼, ⅜, 7/16, ½, ⅝ and ¾-inch.
Blue Heart Manila Lariat, 7/16, 3 and 4-ply.

STANDARD LIST OF EXTRAS, DIMENSIONS AND WEIGHTS ON ROPE.

Diam. ins.	Circum. ins.	No. ft. in 1 lb.	Approx. weight, lbs. Full Coils	Half Coils	Standard Extras
9/16	1/16	80	35	...	.02½
¼	¾	62	45	...	.02
5/16	1	40	55	...	.02
⅜	1⅛	28	65	...	.01½
7/16	1¼	18½	80	...	.01
½	1½	14	90	...	.01
⅝	2	8	155	78	.00½
¾	2¼	6¼	196	98	Basis
13/16	2½	5¼	233	117	Basis
⅞	2¾	4½	270	135	Basis
1	3	3¾	324	162	Basis
1¼	3¾	2½	504	252	Basis

Base prices are for 3-strand rope. 4-strand, 1c per lb. net extra. Hawser Laid special net extra.

Lariat made only in Blue Heart Manila or Red Heart Sisal. 3-ply takes 4c and 4-ply 5c net extra over regular base price on above grades 3 strand rope.

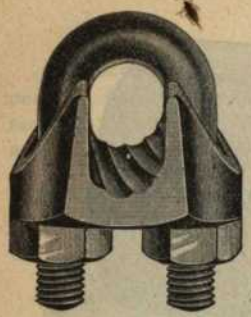
We will cut ⅜-inch Tenex Sisal rope at an extra price of 3 cents per pound net.

We will also cut Blue Heart Manila 4 strand rope ⅞ inch at an extra price of 3 cents per pound net.

Cut lengths of rope cannot be returned.

For Tackle Blocks and Hoists, Refer to Index.

Common Wire Rope Clips



Japanned

Size, ins.	Each
1/4	$0.10
5/16	$0.10
3/8	$0.12
1/2	$0.16
5/8	$0.24
3/4	$0.38
7/8	$0.42
1	$0.64

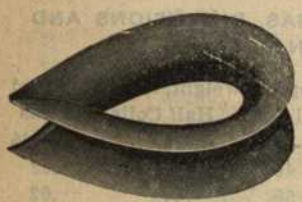
Genuine Crosby Wire Rope Clips*

Japanned

Size, ins.	Each
1/4	$0.35
5/16	$0.35
3/8	$0.40
7/16	$0.45
1/2	$0.45
5/8	$0.55
3/4	$0.65
7/8	$0.75
1	$0.85

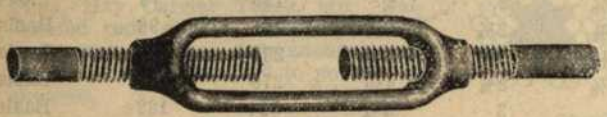
Oval Wire Rope Thimbles

Extra Heavy, Galvanized.



Size, ins.	Each
1/4	$0.16
5/16	$0.20
3/8	$0.22
7/16	$0.24
1/2	$0.26
9/16	$0.34
5/8	$0.36
3/4	$0.42
7/8	$0.45
1	$0.56

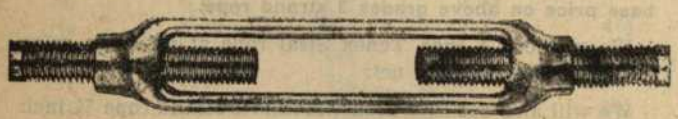
Wrought Turnbuckles



2¾-inch Opening

Price includes bolt ends.

	Each
5/16-inch	Each, $0.42
3/8-inch	Each, $0.44
7/16-inch	Each, $0.46

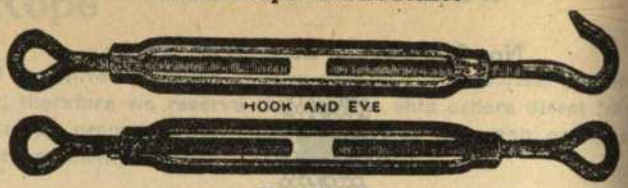


5½-inch Opening

Price includes bolt ends.

	Each
5/16-inch	Each, $0.70
3/8-inch	Each, $0.72
7/16-inch	Each, $0.76
1/2-inch	Each, $0.82
5/8-inch	Each, $0.90
3/4-inch	Each, $1.15
7/8-inch	Each, $1.36
1 -inch	Each, $1.60

Wire Rope Turnbuckles



Two Eyes

All these turnbuckles have U. S. Standard threads. Prices apply to either pattern. Orders must specify whether wanted with Hook and Eye or two Eyes.

Dia. of threads, ins.	Length between heads, ins.	Each
5/16	4	$1.00
3/8	4	$1.04
7/16	6	$1.12
1/2	6	$1.16
5/8	9	$1.60
3/4	9	$2.04
7/8	9	$2.34
1	12	$3.60

Steel Snatch Blocks

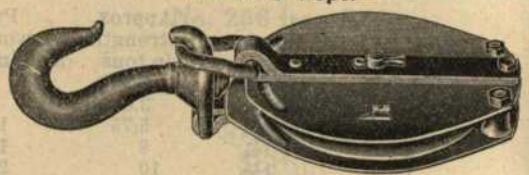
For Sisal and Manila Rope. Not suitable for Wire Rope.

Common iron bushed.

Length of Shell, ins.	Dia. of rope, ins.	Each
6	7/8	4.00
8	1	5.75
10	1¼	8.50
12	1½	10.00

Wrought Iron Snatch Blocks

For Wire Rope.



With phosphor bronze self-lubricating bushings.

Length of shell, ins.	Dia. of rope, ins.	Each
10	5/8	18.00
12	5/8	21.00

Iron Sheaves

For Regular Wood and Steel Tackle Blocks.

Size sheave, ins.	For blocks, ins.	Each
2¼ x 5/8 x 3/8	4	$0.28
3 x ¾ x 3/8	5	$0.46
3½ x 1 x ½	6	$0.60
4¼ x 1 x ½	7	$0.76
4¾ x 1⅛ x 5/8	8	$0.90
6¼ x 1¼ x 5/8	10	$1.40
8 x 1⅜ x ¾	12	$2.30

For Complete Tackle Blocks, see Page 238.
For Wood Sheaves, see Page 586.

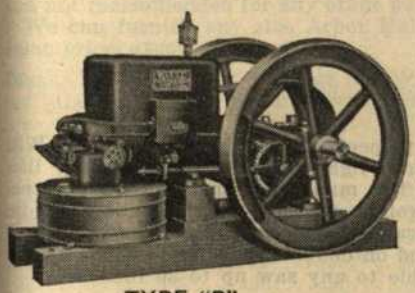
Trojan All-Fuel Engine

2 to 25 Horse Power

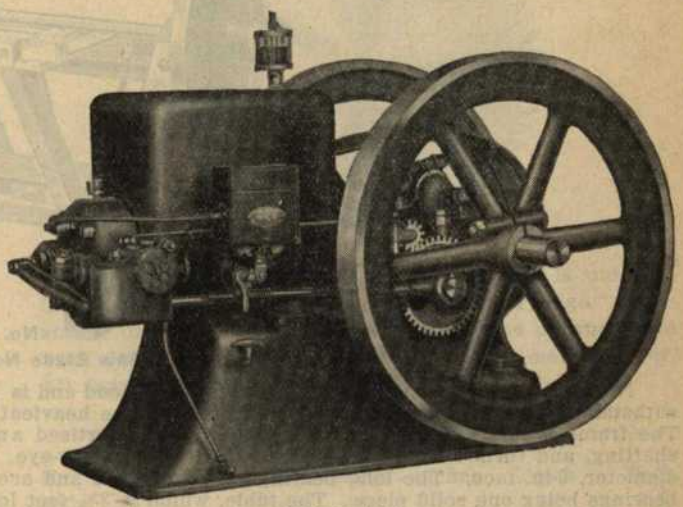
For Telegraph Code, see Page Front of Index

Operates on
Kerosene—Gasoline—
Distillate—Gas

Throttling Governor
Spark Retarder—Easy to Start
Improved Speed Regulator



TYPE "B"
Wood Skids



TYPE "C"
Iron Base
Concealed Tank

"Trojan" Engines Are Guaranteed for Life Against Defects

The Trojan Engine is of the Throttling Governor valve-in-head type, water-cooled, and operates on gasoline, kerosene, distillate or gas. It is simple in construction, easy to start and very economical in its use of fuel and oil. It is sturdy and dependable in any climate and under any condition. It is equipped with a high tension Magneto and the Trojan Spark Retarder, which makes it exceptionally easy to start. It has an Improved Speed Regulator and all-fuel Carburetor, extended crank shaft for pulley on both sides for double drive, plain pulley, starting crank, and operating instructions. It is furnished in two styles, Type "B" with wood base and Type "C" with iron sub-base. Type "C" has fuel tank of extra large capacity concealed in base of engine. The fuel filler opening with spring cap and the drain for fuel tank and the drain from hopper are all conveniently located on near side of engine. The All-Fuel Carburetor makes it unnecessary to have separate attachments for the different fuels. The engine is built of the finest materials throughout, and is unusually well balanced. The Type "B" engine, shown in the small illustration, is the same as Type "C" except that it has no iron sub-base and the fuel tank is of sheet iron located on the wood skids. Both engines are equipped with a high tension Magneto, which is unusually efficient and so simple in construction and operation that it cannot get out of order. This Magneto has eliminated the usual ignition troubles. It has only one moving part, is water-proof and weather-proof, and guaranteed to give satisfaction.

Specifications

Rated Horsepower	Easily Develops H.P.	Normal Speed R.P.M.	Cylinder Bore	Length of Stroke	Diameter of Crank Shaft	Diameter of Flywheels	Plain Pulley Dia.	Plain Pulley Face	Floor Space Required, ins.	Extreme Height	Hopper, Water Cap, Gals.	Fuel Tank Capacity	Shipping Weight Crated
2	2½	600	3¾ in.	5 in.	1¼ in.	16 in.	5 in.	3¼ in.	24x32	21 in.	1¾	2 gals.	285 lbs.
3	3½	530	4¼ in.	6 in.	1½ in.	19 in.	6 in.	4¼ in.	26x36	24½ in.	2¾	3½ gals.	400 lbs.
5	6	450	5 in.	6½ in.	1 13/16 in.	24 in.	8 in.	5¼ in.	30x42	29 in.	5	6 gals.	600 lbs.
7	8	400	6 in.	7½ in.	2 1/16 in.	28 in.	10 in.	6¼ in.	35x48	33 in.	7½	8 gals.	850 lbs.
10⊕	11	390	6½ in.	9 in.	2 5/16 in.	34 in.	12 in.	6 in.	39x60	36 in.	14	9 gals.	1335 lbs.
15⊕	17	315	8½ in.	11 in.	2 13/16 in.	42 in.	16 in.	8 in.	48x72	45 in.	28	16 gals.	2375 lbs.
25⊕	27	300	10 in.	14 in.	3 5/16 in.	53 in.	20 in.	10 in.	59x90	54 in.	50	25 gals.	3400 lbs.

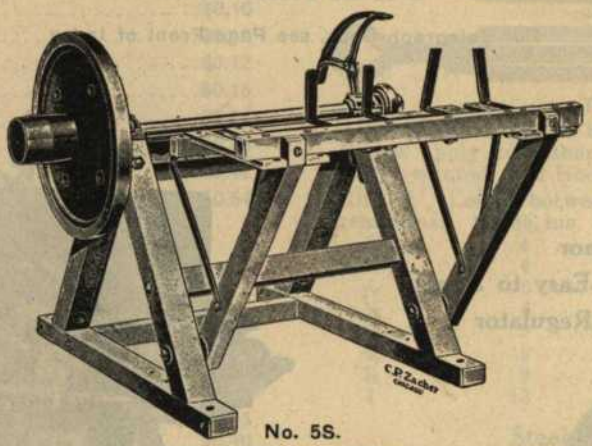
⊕These sizes have outside round fuel tank and special base for concrete or timbers.

	Type "B" Wood Skids	Type "C" Iron Base
2 H-P Trojan All-Fuel Engine equipped with High Tension Magneto Ignition	$ 87.50	$ 99.50
3 H-P Trojan All-Fuel Engine equipped with High Tension Magneto Ignition	$135.60	$150.00
5 H-P Trojan All-Fuel Engine equipped with High Tension Magneto Ignition	$183.50	$203.00
7 H P Trojan All-Fuel Engine equipped with High Tension Magneto Ignition	$267.50	$291.50
10 H-P Trojan All-Fuel Engine equipped with High Tension Magneto Ignition	$455.00	.....
15 H-P Trojan All-Fuel Engine equipped with High Tension Magneto Ignition	$656.50	.....
25 H-P Trojan All-Fuel Engine equipped with High Tension Magneto Ignition	$1068.00	.....

We can also furnish these Engines mounted on Hand Trucks in the small sizes or Horse Drawn Trucks in the large sizes. Can also furnish full mounted sawing outfits equipped with Trojan Engines. Full information and prices on request.

Tilting Table Saw Frame

For Telegraph Code See Page Front of Index.



No. 5S.
Saw Blade Not Included.

No. 5S Saw Frame is designed for sawing cordwood and is guaranteed in every respect. It is strongly built. Will withstand much hard use and easily take care of the heaviest work. Easy to operate, light running and has long life. The frame is made of the best hard wood and is mortised and bolted and braced. The mandrel is made of 1¼-in. steel shafting, and turned down on one end to fit 1⅜-in. saw-eye. The balance wheel weighs 60 lbs. and the pulley is 5-in. diameter, 6-in. face. The long bearings are babbitted and are connected by a solid casting, the casting and lower half of bearings being one solid piece. The table, which is 3½ feet long, is perfectly balanced on double hinges and swings easily. Guard shields the saw blade, insuring the operator's safety. The guards are adjustable to any saw up to 30 inches.

We can also furnish saw frame with 95-lb. balance wheel.

Saw Blade is not included, but we can furnish extra. See next page.

No. 5S —Saw Frame, complete with 60-lb. Balance Wheel.....Each, $42.00
No. 6SF—Saw Frame, complete with 95-lb. Balance Wheel.....Each, $48.00

Approx. weight No. 5S, 215 lbs. and No. 6SF, 250 lbs.

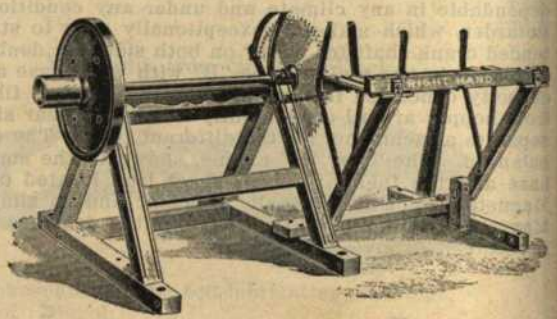
Extension Table Saw Frame

For Telegraph Code See Page Front of Index.

No. 7S Saw Frame is designed for cutting both cordwood and long poles. It is practically the same as the No. 5S shown above, except the tilting table is set out to one side of the main frame to make easier handling of long poles and avoid contact with the balance wheel. We can also furnish saw frame with 95-lb. balance wheel. The Saw Blade is not included, but we can furnish extra. See next page.

Each.
No. 7S —Saw Frame, complete with 60-lb. Balance Wreel...$45.50
No. 8SF—Saw Frame, complete with 95-lb. Balance Wheel...$52.00

Approx. weight, No. 7S, 240 lbs., and No. 8SF, 275 lbs.



Saw Blade Not Included.

Engine Trucks

Made of cast iron with steel pipe axles, wood handle. Painted black. Is designed to carry up to 3 H. P. engines.

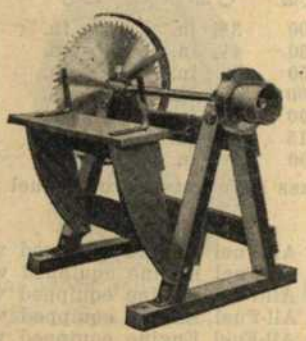
No. 1, diameter of wheels, 9 inches; width of tire, 2 inches; tread, 20 inches; capacity, 400 lbs.; weight, 50 lbs.

No. 2, diameter of wheels, 14 inches; width of tire, 2 inches; tread, 30 inches; capacity, 600 lbs; weight, 100 lbs.

No. 1.....Each, $ 9.50
No. 2.....Each, $21.00

Branch Saw and Frame

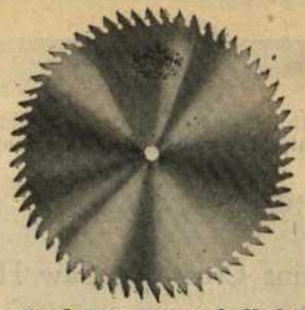
For Telegraph Code, see Page Front of Index



Heavy frame, with base timbers and uprights and a swinging table mounted on two upright standards attached to frame by a chain. Mandrel mounted in substantial boxes. Mandrel shaft has 5-in. blade diameter pulley with surface for 3-in. belt, and is equipped with regular 18-in. saw blade and 25-lb. fly wheel. Easily placed between trees, in the thickets, or among branches. Weight, 100 lbs.

No. 2190—Complete, with 18-in. Blade.....Each, $33.00

Cordwood Saw Blades



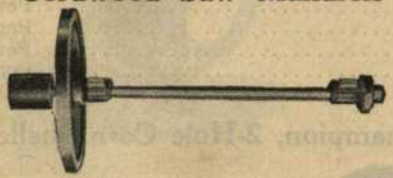
This is a guaranteed saw, set and filed ready for use, and each saw packed in crate for shipment. Each saw is guaranteed against any defect, and will be replaced free of charge, provided it is defective.

This saw is especially adapted for sawing cordwood, and not recommended for any other purpose.

We can furnish any size Arbor Hole not shown at this same price, except f. o. b. factory.

Diam. ins.	Gauge	Hole, ins.	Teeth	Wgt. not crated	Wgt. crated	Speed per min.	Each
18	13	1⅜	48	5	8	2,000	12.50
20	13	1⅜	52	8	11	1,800	15.00
22	12	1⅜	56	11	14	1,636	17.50
24	11	1⅜	60	14	18	1,500	20.50
26	11	1⅜	64	16	20	1,384	24.00
28	10	1⅜	70	20	25	1,285	28.00
30	10	1⅜	76	25	31	1,200	32.00
32	10	1⅜	80	30	36	1,120	36.50
34	9	1⅜	80	36	43	1,050	41.00
36	9	1⅜	80	40	47	1,000	47.00

Cordwood Saw Mandrels



Cut shows with Fly wheel and disconnected boxes.

Furnished with either Connected or Disconnected Boxes. All Complete ready to bolt to the frame.

Length of boxes, 4 ins.; length of frame, 36 ins.; extreme length, 49 ins.: dia. of shaft, 1½ ins.; arbor fits saws with 1⅜-inch arbor holes; diameter of fly wheel, 16 ins.; pulley, 6 ins. wide, 5 ins. diameter. 60-lb. balance wheel.

Weight, with connected boxes, 140 lbs.; with disconnected boxes, 125 lbs.

No. 1791—With connected boxes.....Each, $28.00
No. 1792—Without connected boxes.....Each, $24.00

Circular Saw Mandrels

Pulley Outside Boxes.

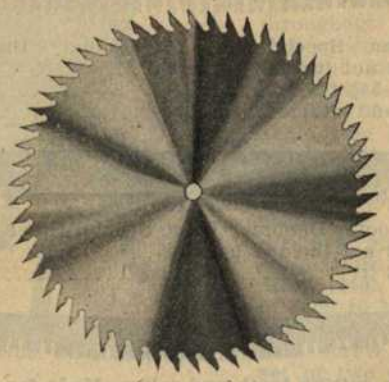
The latest and improved pattern. Pulley on right hand side with left hand threads.

Can furnish when specially ordered with pulley on left hand side with right hand threads.

No.	Saw hole, ins.	Shaft, ins., Dia.	Length	Pulley face, ins.	Weight, lbs.	Each
1	1	1 1/16	16	3½	19	7.20
2	1⅛	1 1/16	19	4	24	8.10
3	1¼	1 5/16	21	4½	36	11.70
4	1 5/16	1 7/16	24	5	45	13.70
5	1 5/16	1 7/16	26	5½	50	16.20
6	1⅜	1 7/16	28	6	54	17.00
7	1⅜	1 7/16	30	6½	68	18.00
8	1½	1 9/16	32	7	76	21.60
9	1⅝	1 11/16	37	8	87	25.20
10	1⅝	1 13/16	41	8	98	28.80

Circular Saw Blades

Shipped from Factory, St. Louis, Mo.



Made of best crucible steel. The temper is uniform, tension exact, and the teeth will hold their edge. Guaranteed to be free from defects, and to stand up under the work for which they are intended by the manufacturer. All saws filed and set ready for use.

No.	Diam., inches	Cut	Thickness Gauge	Size Hole, inches	No. Teeth	Each
10C	10	Cross	16	1	96	5.60
10R	10	Rip	16	1	32	5.60
12C	12	Cross	15	1	50	7.00
12R	12	Rip	15	1	30	7.00
14C	14	Cross	14	1⅛	84	8.50
14R	14	Rip	14	1⅛	32	8.50
16C	16	Cross	14	1⅛	64	10.50
16R	16	Rip	14	1⅛	34	10.50
18C	18	Cross	13	1¼	58	12.50
18R	18	Rip	13	1¼	36	12.50
20C	20	Cross	13	1 5/16	54	15.00
20R	20	Rip	13	1 5/16	36	15.00
22C	22	Cross	12	1 5/16	56	17.50
22R	22	Rip	12	1 5/16	36	17.50
24C	24	Cross	11	1⅜	60	20.50
24R	24	Rip	11	1⅜	36	20.50
26C	26	Cross	11	1⅜	64	24.00
26R	26	Rip	11	1⅜	36	24.00
28C	28	Cross	10	1½	70	28.00
28R	28	Rip	10	1½	36	28.00
30C	30	Cross	10	1½	76	32.00
30R	30	Rip	10	1½	36	32.00
32C	32	Cross	10	1⅝	80	36.50
32R	32	Rip	10	1⅝	36	36.50
34C	34	Cross	9	1⅝	80	41.00
34R	34	Rip	9	1⅝	36	41.00
36C	36	Cross	9	1⅝	80	47.00
36R	36	Rip	9	1⅝	36	47.00

Circular Saw Mandrels

Pulley Inside Boxes.

No.	Saw hole, ins.	Shaft, ins., Dia.	Length	Pulley face, ins.	Weight, lbs.	Each
1C	1	1 1/16	16	3½	19	7.20
2C	1⅛	1 1/16	19	4	24	8.10
3C	1¼	1 5/16	21	4½	36	11.70
4C	1 5/16	1 7/16	24	5	45	13.70
5C	1⅜	1 7/16	26	6	50	16.20

Atkins Cross-Cut Saws

Lone Star. Special Steel, 14x18 gauge. Diamond tooth. Price does not include handle.
No. 223A—5½ ft.....Each, $9.12
No. 223B—6 ft.....Each, $9.90

Tuttle tooth, Diamond Point Special Steel 14x18 gauge. Price does not include handles.
No. 331—6 ft.....Each, $9.12

Has four cutting teeth and raker. Made for cutting pine, hardwoods, and resinous, knotty timber. Unsurpassed for speed and light running. Favorite with timber cutters who prefer a high grade saw. 14x20 gauge. Price does not include handles.
No. 553—6 ft.....Each, $13.60

Atkins Silver Steel. Segment ground. Designed for white pine, yellow poplar and woods of this class. 14x20 gauge. Perforated tooth. Price does not include handles.
No. 518—6 ft.....Each, $13.60

Perfection perforated tooth. Designed for cutting yellow pine, hardwoods and resinous, knotty timber. For medium size lumber. 14x20 gauge. Price does not include handle.
No. 4—6 ft.....Each, $13.60

Atkins One-Man Cross-Cut Saws

Tuttle Tooth. Handles made of carefully selected air dried beech, nicely finished. Atkins Easy Grip Pattern.
No. 490A—3 ft.....Each, $4.10
No. 490B—3½ ft.....Each, $4.78
No. 490C—4 ft.....Each, $5.44

Atkins Cross-Cut Saw Handles

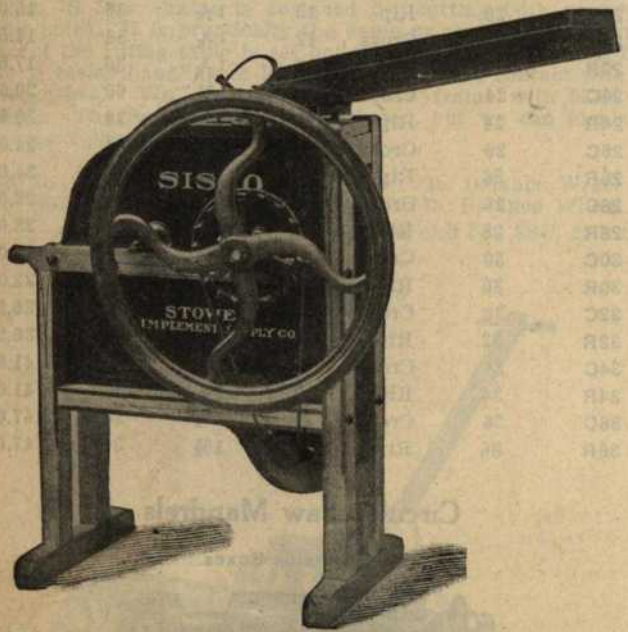
No. 8. No. 6. No. 11. No. 22.

No. 8 has malleable castings and swivel washer cast to socket. Spot electric welded loop of high tensile strength, cold drawn steel, japanned black. Specially selected air-dried hardwood stock. 10 inches long. No. 6 similar to No. 8, but lighter.

No. 11 has malleable castings, easily adjustable. Cast iron face plate and washer. Machine made steel bolt. No. 22 has extra large wings to prevent casting from slipping. Japanned black. Specially selected air-dried hardwood stock 14 inches long.

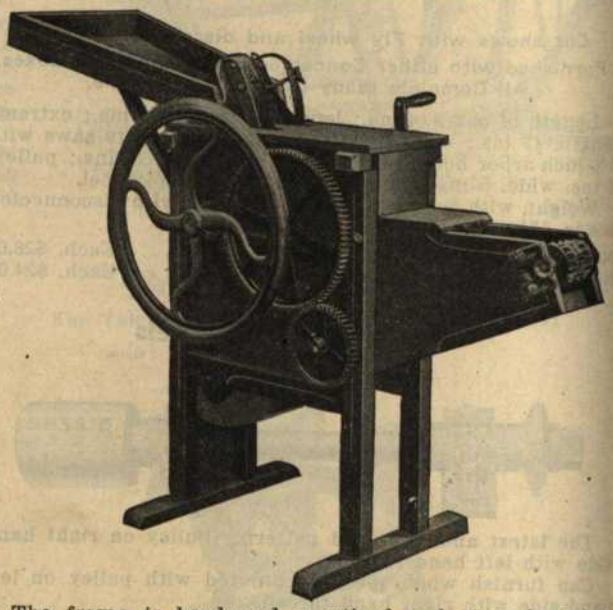
No. 8.....Per pair, $0.90
No. 6.....Per pair, $0.80
No. 11.....Per pair, $0.70
No. 22.....Per pair, $1.00

Sisco, 1-Hole Corn Shellers



The frame is hardwood, securely bolted together, making it rigid, solid and very durable. Attractively finished. The feed spout is directly over shelling wheels, making feeding easy. It can be adjusted to feed either large or small ears. Bearings are all bored true to size. Heavy balance wheel. We can furnish an 8x2-inch belt pulley to clamp onto the regular balance wheel for operating with power. This is shipped only when ordered, and at an extra price. Approximate capacity, 12 to 15 bu. per hour. Weight, 140 lbs.
No. 29—Complete as above.....Each, $29.00
Clamp Belt Pulley, extra.....Each, $ 2.00

Champion, 2-Hole Corn Shellers



The frame is hardwood, mortised and strongly bolted together, making it rigid, solid and very durable. Attractively finished. It is furnished with a cob carrier, which separates the corn from the cobs, and deposits the cobs at a distance from the sheller. Power and speed are transmitted by strong gearing, and there is no slipping or lost motion. The shafting is cold rolled steel. It can be adjusted to feed either large or small ears. Feeding is easy and positive. A belt pulley is included so the Sheller can be operated by power if desired. Pulley has 4-inch face and is 8 inches in diameter. Approximate capacity, 35 to 45 bu. per hour. Weight, 285 lbs.
No. 14—Complete as above.....Each, $60.00

No. 17 Black Hawk Corn Sheller

The Black Hawk is a clean and rapid hand-power sheller. It will not choke, is very durable, principal parts malleable iron. It is easily and quickly fastened to a box or barrel by clamps; no holes to bore. Any parts broken, worn out or lost, replaced free. Capacity, 8 to 14 bushels per hour. Weight, 15 lbs.

No. 17.....Each, $6.00

No. 19 Black Hawk Grist Mill

Makes graham flour, corn meal, hominy, chicken feed, cracked wheat, etc.

Easily taken apart for cleaning or for repairing. Quickly adjusted for fine or coarse grinding.

Grinding plates are made of hardest and strongest metals.

Has both holes and slots for fastening to table, bench, or other support. Bolts and wrench with each machine. Weight, 17 lbs.

No. 19.....Each, $7.00

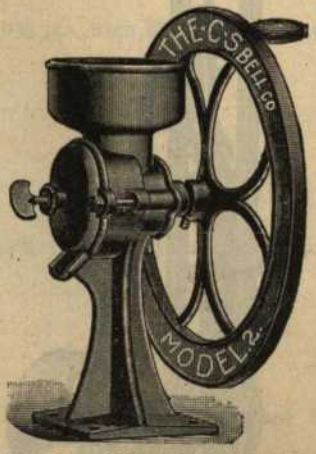
Model Grinding Mills

An improved hand power grinding mill for grinding all kinds of grain, shells, salt, etc.

An all around family mill, producing cracked wheat, graham flour and corn meal, cracked ground corn or other grain of any fineness for feeding young chicks or grown fowls. Adjustable to grind fine or coarse without the use of a wrench.

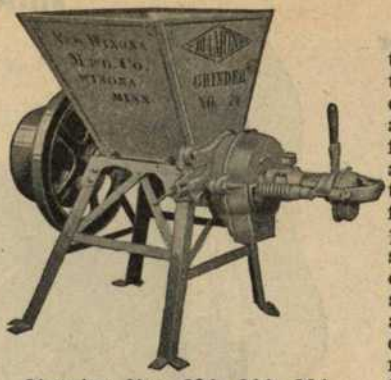
Burrs are made of steel alloy metal.

Packed one in a wooden crate.



No.	Height, ins.	Width, ins.	Wheels, ins.	Weight, lbs.	Each
1A	13	8¼	12½	28	$ 7.10
2A	16	9½	16½	50	$12.00
3A	20	12½	20	85	$16.80

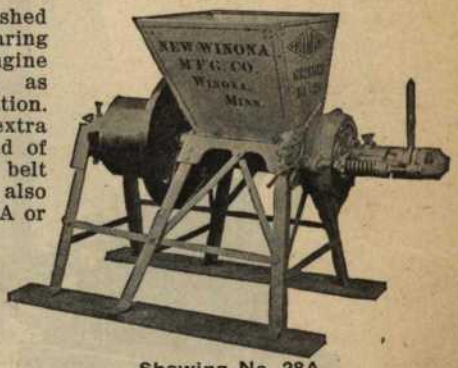
Diamond Corn and Cob Grinder



Showing Nos. 20A, 24A, 26A.

Built of iron and steel throughout. Every feature of construction is designed for durability and service. The main frame is of extra heavy angle iron legs braced to prevent the frame from buckling. The hopper is made of heavy sheet iron. Cob crushers are positive feed spiral type. Burrs are alloy steel. The flow of feed to the burrs is regulated by a positive feed screw device. A set of two double face burrs, medium and fine, are furnished with each mill. Mills equipped with spring tension device which provides equal tension on both sides of the burrs.

No. 28-A is furnished with an extra bearing stand for heavy engine or tractor drive, as shown in illustration. This serves as an extra support for the end of shaft outside the belt pulley. We can also furnish the Nos. 24A or 26A with a similar attachment when specially ordered and at an extra cost.



Showing No. 28A.

No. 20A has 6-inch burrs. Belt pulley 8x6 inches. Intended for use with 2 to 4 H. P. engines. Grinding capacity 5 to 18 bu. per hour. Weight, 170 lbs.

No. 24A has 8-inch burrs. Belt pulley 12x6 inches. Intended for use with 3 to 7 H. P. engines. Grinding capacity 8 to 30 bu. per hour. Weight, 290 lbs.

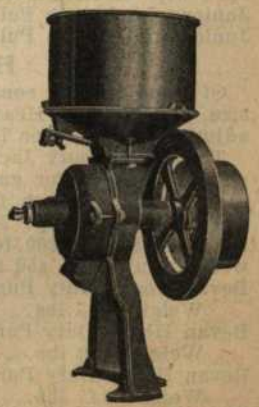
No. 26A has 10 inch burrs. Belt pulley 12x6 inches. Intended for use with 6 to 12 H. P. engines. Grinding capacity 18 to 50 bu. per hour. Weight, 310 lbs.

No. 28A has 10-inch burrs. Belt pulley 12x6 inches. Intended for use with 10 to 15 H. P. engines. Grinding capacity 30 to 60 bu. per hour. Weight, 450 lbs.

No. 20A.....Each, $ 50.00
No. 24A.....Each, $ 68.00
No. 26A.....Each, $ 75.00
No. 28A.....Each, $117.00

Diamond Junior Feed Grinders

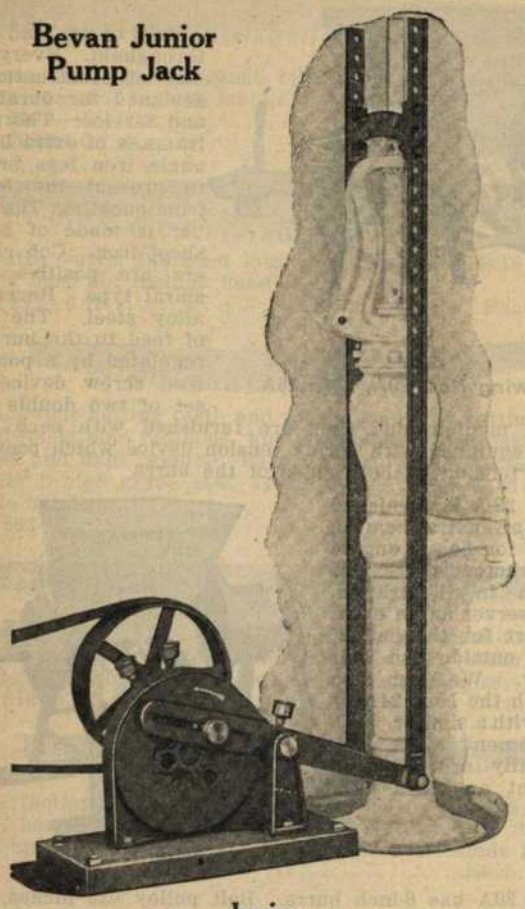
A small general purpose, power Feed Grinder, made of iron and steel throughout. Well painted. Height of mill 26 ins. Belt Pulley 8x3 ins. Double face burrs 5½ ins. diameter. Large hopper. Power 1 to 5 H. P. Speed 600 to 1000. Capacity 5 to 25 bushels per hour, depending on power used. Furnished with or without balance wheel and extra base. When so ordered we furnish equipped with extra base and with 15-lb. balance wheel.



No. 1LB —Without Balance Wheel.....Each, $15.50
No. 1WB —With Balance Wreel.....Each, $18.00
No. 1WBB—With Balance Wheel and Base...Each, $21.70

Pump Jacks

Bevan Junior Pump Jack



Junior

The Bevan Junior Pump Jack has an exclusively patented method of distributing the power to the pump by means of a walking beam.

This walking beam arrangement is so designed as to make possible a long leverage on the lift stroke and a short leverage on the return stroke which reduces by 50 per cent the power necessary to operate the pump. Slow lift and quick return stroke saves half the power and doubles the capacity of the pump. Will operate any type of hand, force or windmill pump. Geared 6 to 1, and adjustable for 4, 5 or 6-inch stroke. The travel of the lift rods is only ¼ inch from the vertical position, eliminating all side thrust, jerking and undue wear on pump. All gears enclosed as a protection against accidents.

The Bevan Junior is for use on wells of not more than 100 ft. water lift. For use on wells of more than 100 ft. water lift, we recommend the Heavy Duty Bevan Jack.

The Junior is furnished with two sizes of pulleys: 10-inch for using Jack with gasoline engine, and 18-inch for using Jack with electric motor.

Junior with 10-inch Pulley. Weight, 70 lbs....Each, $23.00
Junior with 18-inch Pulley. Weight, 80 lbs....Each, $27.20

Heavy Duty

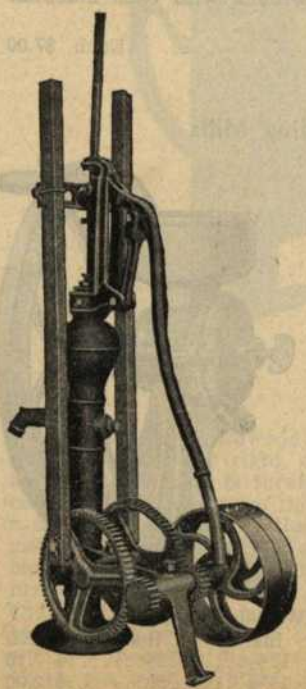
Of same general construction and quality as the Junior size, but built for Heavy Duty work. Geared 5 to 1, and adjustable for 4, 6 or 7-inch stroke.

The Heavy Duty Jacks are furnished with four sizes of pulleys: 12-inch for gasoline engine for wells not deeper than 200 ft.; 16-inch for gasoline engine for wells from 200 to 450 ft. deep; 24-inch for electric motor for wells not deeper than 200 feet.; 30-inch for electric motor for wells from 200 to 450 ft. deep.

Bevan Heavy Duty Pump Jack, with 12-inch Pulley.
Weight, 115 lbs.....Each, $34.00
Bevan Heavy Duty Pump Jack, with 16 inch Pulley.
Weight, 130 lbs.....Each, $37.00
Bevan Heavy Duty Pump Jack, with 24-inch Pulley.
Weight, 145 lbs.....Each, $39.50
Bevan Heavy Duty Pump Jack, with 30-inch Pulley.
Weight, 160 lbs.....Each, $42.00

Heavy Duty Bevan Pump Jack

Double Geared Pump Jack



A strong, durable jack. Main frame is well proportioned substantial design. Pitmans furnished are of best seasoned hardwood. Jacks are so designed that in changing from belt power to windmill or hand, it is not necessary to detach jack from pump—simply remove the pin from cross-head and connect the windmill slide or handle. Clamps firmly and securely to any pump in upright position. Foot of pump gives solid support to pulley end of jack. By distributing strain over four gears, wear is reduced. Double gears produce a steady, even lift on the pump plunger, which prolongs the life of the pump and jack, eliminating the side draft. Lift range 200 feet. Gear ratio 4 to 1; 5, 7½ or 10-inch stroke. Belt pulley 13x2. Weight, 90 lbs.

No. 4.....Each, $14.50

Repairs for all Pump Jacks can be furnished from factory only. Orders must give number on old casting.

Cider Mills

Shipped from Factory, Racine, Wis.

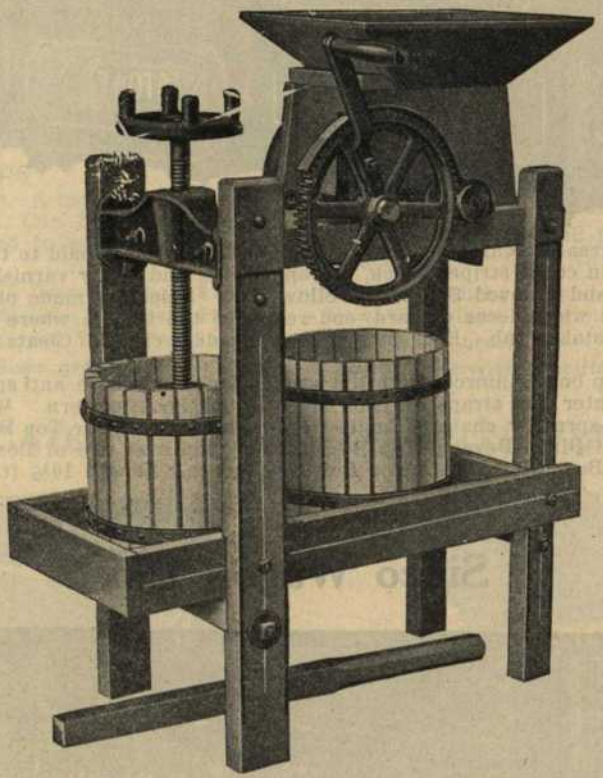


Illustration shows No. 15C Medium.

The most up-to-date and best mills on the market, with "Positive Force Feed." The frames are of heavy hardwood and well built. Made of the best grade of iron and steel in the working parts. Grinding mechanism consists of a hardwood cylinder in which is securely imbedded a series of steel knives for cutting and grating the fruit.

Made in three sizes to take care of the demands of different trade. With the Senior, large capacity machine, we regularly include two cranks; with the smaller machines only one crank. We can also furnish a belt pulley for any of these machines so they may be operated by power, when ordered specially at an extra price.

Junior Cider Mills

Furnished with two tubs, 10½ ins. high by 11 ins. diameter. Capacity of 2 to 4 bbls. per day.

No. 14C—Weight 155 lbs. ..... Each, $45.20

8x4 Belt Pulley, extra ..... Each, $ 2.10

Medium Cider Mills

Furnished with two tubs, 12¾ in. high by 14½ in. diameter. Capacity 4 to 6 bbls. per day.

No. 15C—Weight 215 lbs. ..... Each, $53.50

8x4 Belt Pulley, extra ..... Each, $ 2.10

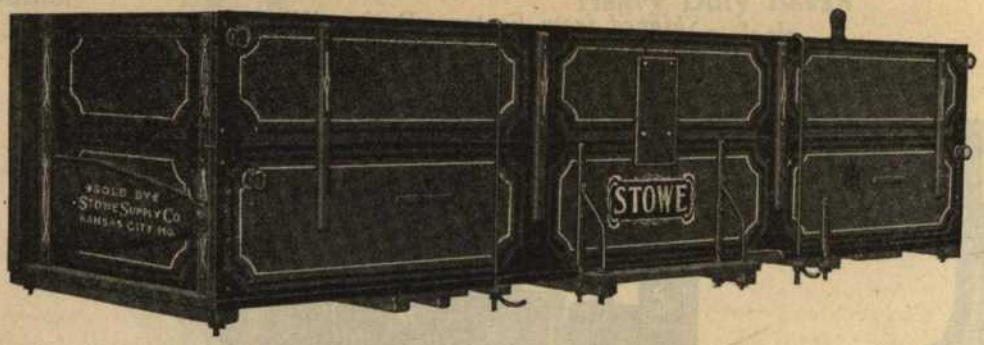
Senior Cider Mills

Furnished with two tubs, 14 ins. high by 17 ins. diameter. Capacity of 6 to 12 bbls. per day.

No. 16C—Weight 330 lbs. ..... Each, $74.50

10x4 Belt Pulley, extra ..... Each, $ 2.80

Stowe Wagon Box



This box is made with the greatest care throughout. Special attention is paid to the finish. It is painted with three coats of high grade paint, green in color, striped black, red and white, and finely varnished.

Bottom is 3½-inch tongued and grooved Southern Yellow Pine. Sides are made of Red Gum. Five heavy oak cross pieces, riveted at each end. Two wide pieces of hardwood reinforce the bottom where it rides the bolsters. Sides have strips of Iron where the bolster stakes rub. Four pair of Oak straddle cleats. Cleats are well riveted. Line holder on front end gate.

Board on outside center of top box reinforces both top and bottom box where anti spreader chain fastens.

⅝-inch Box Straps. Two center box straps on each side are of hook pattern. ½-inch Side Braces. $\frac{7}{16}$-inch Self-centering Box Rods. Heavy anti-spreader chains. Angle iron grain cleats. Four Top Box Fasteners made of ⅜-inch rods with handle nuts for tightening. ¾-inch Beveled Top Box Irons extend over end of Box and are securely fastened down. 9¼-inch Cast Rub Irons. Bottom Box 13½ inches. Top Box 12¼ inches. Length 10½ ft. outside. Depth 26 inches inside.

No. 1—38-inch Narrow Track. Weight each, 325 lbs.....Each, **$60.00**

Sisco Wagon Box

Our Sisco box has 5 oak cross pieces; ⅝-inch box straps; $\frac{7}{16}$-inch side braces and ⅜-inch endgate rods and 7-inch flat steel rub irons.

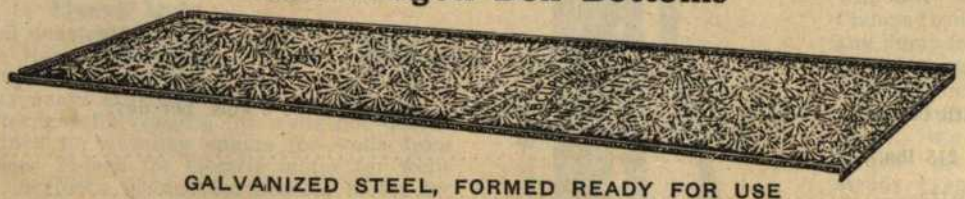
¾-inch beveled box irons extend over end and are bent over and fastened, thus strengthening the sides. Grain cleats are angle iron.

The floor of the Sisco is of 3½inch yellow pine. Sides are red gum. It has an anti-spreader chain and one hook-over top box fastener on each side. Patent dump end gate. Bottom box, 13½ inches; top box, 12¼ inches; total depth, 26 inches inside.

This box is very nicely finished, painted, striped and varnished.

No. 5—38 inch Narrow Track. Weight each, 350 lbs.....Each, **$50.00**
No. 6—42-inch Wide Track. Weight each, 375 lbs.....Each, **$56.00**

Steel Wagon Box Bottoms



GALVANIZED STEEL, FORMED READY FOR USE

Made of 22-gauge galvanized steel with edges formed to fit a narrow track wagon box. Packed three in a crate. Furnished only in full crates

No. 131—For 38-inch Narrow Track Wagon Box, 3 in a crate. Weight per crate, 161 lbs.....Per crate, **$29.00**

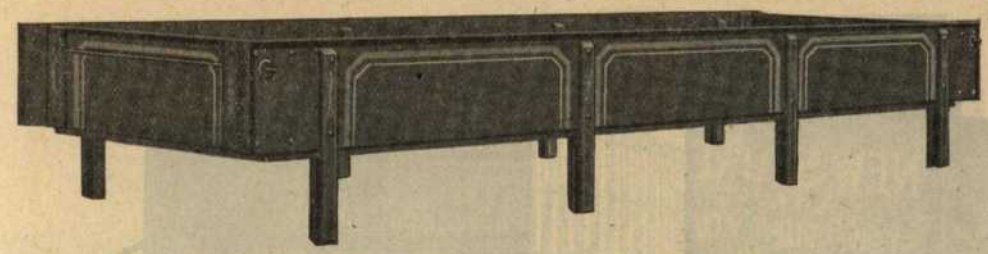
PLAIN GALVANIZED STEEL

These are simply flat 24-gauge galvanized steel sheets, 38 inches wide and 132 inches long. These bottoms are slightly longer than a regular wagon box to permit the end being turned down over the bottom for fastening.

No. 161—38x132 inches. Weight each, 42 lbs.....Each, **$7.00**

For Extra Angle Iron Grain Cleats, refer to Index.

EXTRA TIPTOP BOXES



Cut Shows Stowe Grade. Sisco Grade has 3 pairs straddle cleats.

STOWE GRADE

Four pairs of oak straddle cleats. 7/16-inch self-centering box rods. Angle iron grain cleat. Can be used on any standard wagon box, but is painted to match our Stowe Wagon Box.

No. 208— 8-inch, complete. Wgt. 75 lbs.....Each, $17.60
No. 210—10-inch, complete. Wgt. 85 lbs.....Each, $19.80

SISCO GRADE

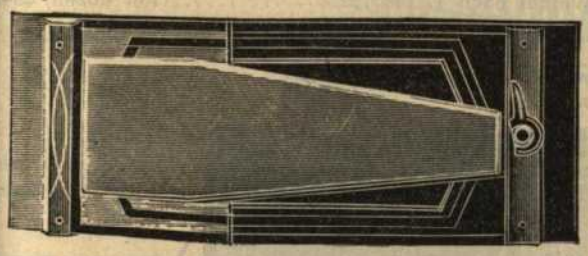
Similar to the Stowe Grade, but has only three pairs of oak straddle cleats and painted to match the Sisco Box. 3/8-inch endgate rods. No grain cleats.

No. 308— 8-inch, complete. Wgt. 85 lbs.....Each, $14.70
No. 310—10-inch, complete. Wgt. 100 lbs.....Each, $17.00

Above prices are for Narrow Track. For Wide Track on either pattern, add net 25c.

Sisco grade sent on all orders unless otherwise specified.

HINGED ENDGATES



STOWE GRADE

Made to match the grade of our Stowe Wagon Boxes. Well ironed and finished.

No. 214—14-inch, for 38 inch box.....Each, $3.40
No. 215—15-inch, for 38-inch box.....Each, $3.80
No. 216—16-inch, for 38-inch box.....Each, $3.80
Extra for wide track..... $0.60

SISCO GRADE

Made to match the grade of our Sisco Wagon Box.

No. 314—14-inch, for 38-inch box.....Each, $3.00
No. 315—15 inch, for 38-inch box.....Each, $3.40
No. 316—16-inch, for 38-inch box.....Each, $3.40
Extra for wide track..... $0.60

Sisco grade sent on all orders unless otherwise specified.

PLAIN ENDGATES

These endgates are exactly the same as are furnished in our Sisco grade tiptop boxes.

No. 408— 8-inch, for 38-inch box. Wgt. 8 lbs. Each, $2.50
No. 410—10-inch, for 38-inch box. Wgt. 10 lbs. Each, $2.80
Extra for 42-inch wide-track box. Wgt. 12 lbs. Each, $0.40

SPRINGS AND BARS

For Spring Seats

Consist of 2-leaf seat spring with bottom wooden bar attached and seat hooks.

No. 242.....Per pair, $5.80

For extra Springs only, see Index.

SCHUTTLER PATTERN SPRING SEATS

These Schuttler pattern seats are easy riders. Oil tempered springs. One-piece bottoms and oak cross bars. Well ironed. Painted green, striped and varnished. Fits any make of wagon box.

No. 26—For 38-inch box. Wgt. 36 lbs.....Each, $ 9.70
No. 27—For 42-inch box. Wgt. 39 lbs.....Each, $10.70

REGULAR PATTERN SPRING SEATS

Will fit any make of wagon box. Rides easy. Oil tempered springs. Oak cross bars and one-piece bottoms. Painted green, striped and varnished.

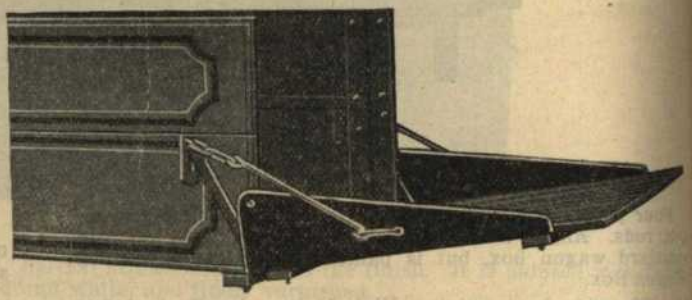
No. 24—For 38-inch box. Wgt. 36 lbs.....Each, $ 9.70
No. 25—For 42-inch box. Wgt. 39 lbs.....Each, $10.70

Shoveling Boards

For Telegraph Code, See Page Front of Index.

NEW STOWE.

Outside Steel Wings.

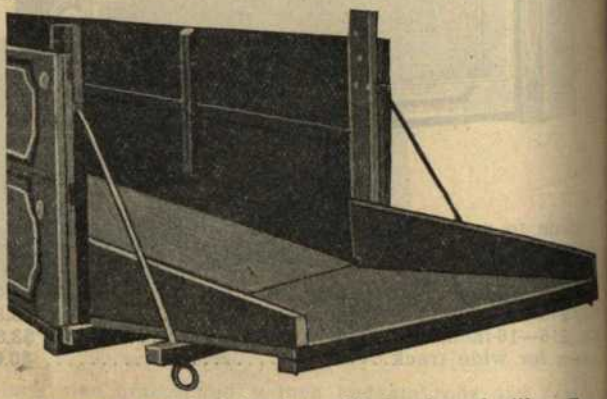


This board has few equals. It is quickly and easily adjusted to any bed. It slips on or off without use of tools of any kind. No bolts or multilation of beds necessary. It can be thrown out at bottom for dumping in elevator. It can be thrown over on top of bed and used as seat when bed is empty. The lumber used is first-class, and the general finish of this board is above the average. Well painted. It is made of yellow pine, tongued and grooved. Attachments are all wrought iron. Steel crabs. Wings are of high carbon steel.

No. 28 —36 inches high, for 38-inch narrow track Wagon Boxes, Weight each 38 lbs.....Per dozen, $85.50
No. 29 —36 inches high, for 42-inch wide track Wagon Boxes, Weight each 42 lbs.....Per dozen, $90.30
No. 28A—42 inches high, for 38-inch narrow track Wagon Boxes, Weight each 42 lbs.....Per dozen, $90.00
No. 29A—42 inches high, for 42-inch wide track Wagon Boxes, Weight each 47 lbs.....Per dozen, $94.80

FAULTLESS.

Inside Wood Wings.



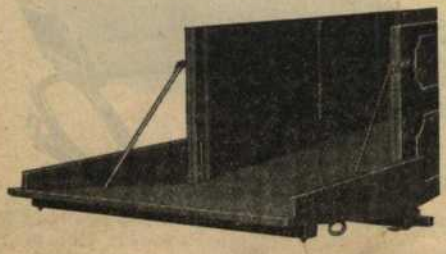
Attaches to cleats held in place by bolts through box rod holes. Made of matched lumber with hardwood sills. Easy to attach. Wood wings fit snug against uprights, making a very tight grain box. Well painted.

Quickly lifted off or put back on the box and can be turned over the top or opened at the bottom and used as a dump board.

No. 30 —36 inches high, for 38-inch narrow track Wagon Boxes, Weight each 44 lbs.....Per dozen, $74.00
No. 31 —36 inches high, for 42-inch wide track Wagon Boxes, Weight each 48 lbs.....Per dozen, $78.80
No. 30A—42 inches high, for 38-inch narrow track Wagon Boxes, Weight each 48 lbs.....Per dozen, $79.00
No. 31A—42 inches high, for 42-inch wide track Wagon Boxes, Weight each 54 lbs.....Per dozen, $93.80

BOSCO.

Outside Wood Wings.

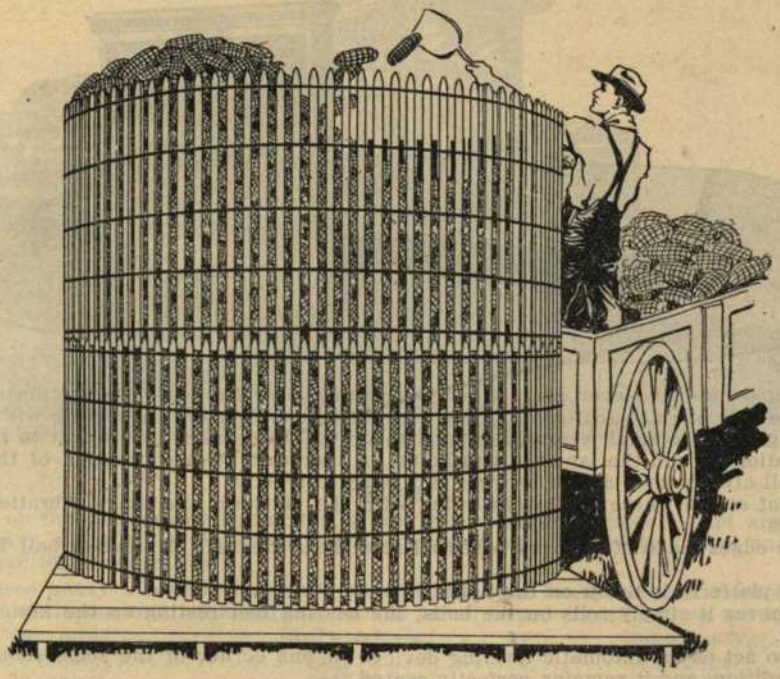


Made of matched lumber and well painted. No cast iron parts. Fastens by two bolts in box rod holes. Easy to attach.

No. 32—36 inches high, for 38-inch narrow track Wagon Boxes, Weight each 43 lbs.....Per dozen, $66.00
No. 33—36 inches high, for 42-inch wide track Wagon Boxes, Weight each 48 lbs.....Per dozen, $66.80
No. 34—42 inches high, for 38-inch narrow track Wagon Boxes, Weight each 48 lbs.....Per dozen, $66.00
No. 35—42 inches high, for 42-inch wide track Wagon Boxes, Weight each 53 lbs.....Per dozen, $70.80

Portable Slat Corn Cribs

For Telegraph Code, See Page Front of Index



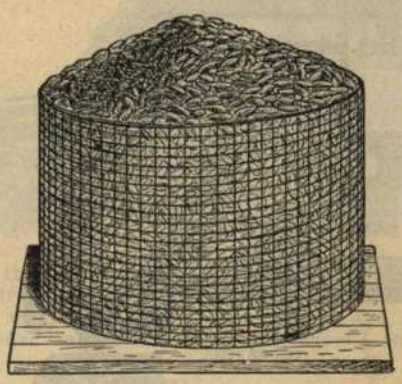
Our Portable Corn Cribs are made to the following specification: Each section four feet high, consisting of heavy slats 1½ in. wide, spaced 2 in. apart, woven between five cables of No. 12 heavy galvanized wire, painted with red mineral preservative. Capacity is based on 2 cu. ft. per bushel.

No. 400 Cribs are in one section 48 ft. long, and when used in one piece hold approximately 400 bu. No. 500 Cribs are in one section 56 ft. long, and when used in one piece hold approximately 500 bu. Two No. 400 Cribs can be used one above the other as shown in the illustration to make an 800-bu. crib, or two No. 500 will make a 1000-bu. crib. All capacities are based on mathematical calculation.

No. 400—Weight, 180 lbs. ..... Each, **$8.00**
No. 500—Weight, 210 lbs. ..... Each, **$9.50**

Portable Wire Corn Cribs

For Telegraph Code, See Page Front of Index

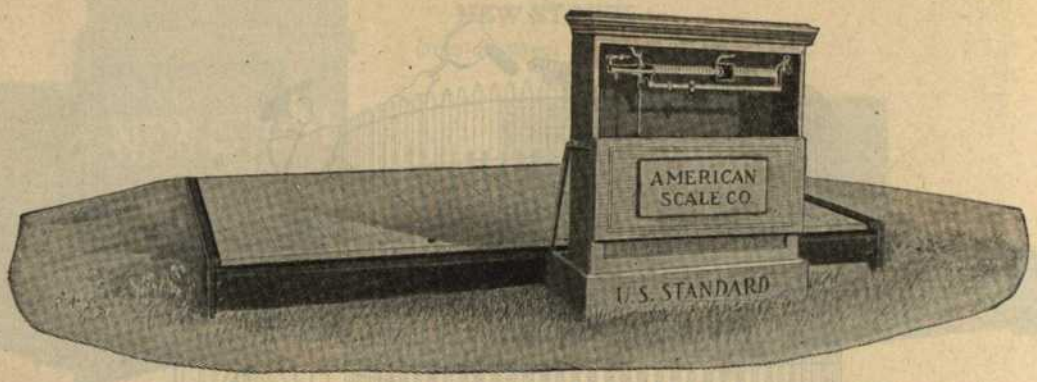


Line wires 2 inches apart; stay wires 4 inches apart. No. 14 gauge wire. 48 inches high. No. 50 cribs are in one section 50 ft. long and when used in one piece hold approximately 400 bu. No. 75 cribs are shipped in two sections, each 37½ ft. long, a total of 75 ft. long. When used in two sections one above the other it will hold approximately 400 bu. When used with both pieces fastened together in one length 75 ft. long, with a diameter of 24 ft., it will hold approximately 900 bu. Two No. 50 Cribs can be used one above the other to make an 800 bu. Crib or two No. 75 used full length placed one above the other will make an 1,800 bu. Crib. All capacities are based on mathematical calculation.

No. 50—Weight, 41 lbs. ..... Each, **$6.50**
No. 75—Weight, 63 lbs. ..... Each, **$9.80**

American Wagon Scales

Pitless



These scales are built on the five-lever plan, which is recognized as the best construction by leading scale experts.

There are two pipe levers, one at each end of the scale, and two arm levers connecting with the pipe levers. The two arm levers carry the weight to the small cross lever, and the cross lever takes the weight to the beam.

All the levers are stationary and the jar of a load going on the scale or the vibration of the platform will not move them. Therefore they will always keep a true bearing and weigh correctly.

This cannot be said of scales where the levers swing with the platform and every vibration and jar of the platform directly affects the levers.

Extremely wide knife edges made of the very best tool steel heat treated. Hardened ball bearings that take all the wear off of knife edges.

All movement of the platform is taken on the balls.

When the platform moves it simply rolls on the balls, the bearing feet resting on the knife edges never stir, and the levers are always at rest.

The ball bearings also act as an automatic leveling device. If one corner of the scale should settle out of level, the balls take care of the condition, and it remains perfectly seated.

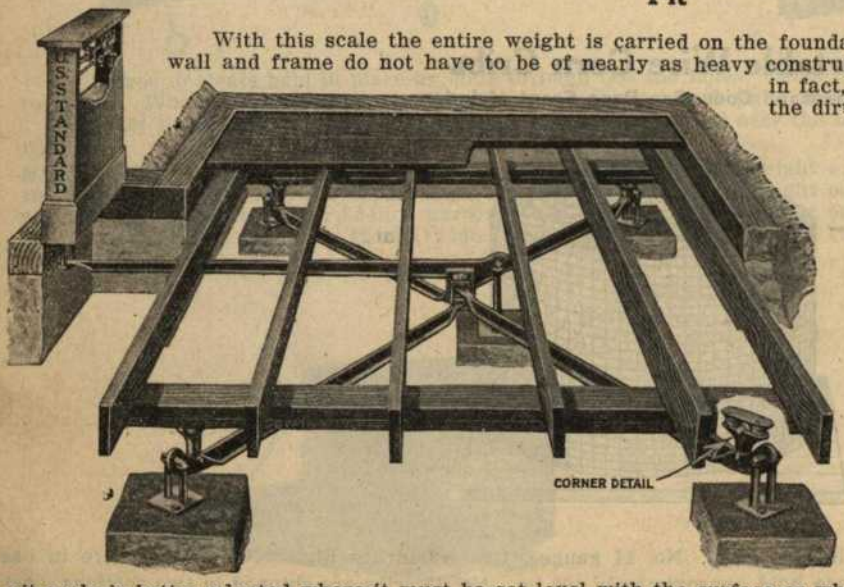
The joists are of heavy "I" beam structural steel and are strong enough to carry more than the rated capacity of the scale. The floor is fastened to the joists by spiking to a 2x4 bolted to the side of each joist.

The Compound Tare Weight Beam with which some of these scales are equipped has two bars. The main upper bar is graduated by 200 pounds. The lower bar is in two sections, one graduated by five pounds up to two thousand and the other by 2½ pounds up to 200.

Wood parts for floor are not included with these scales.

No. 31	—Capacity 5 tons, with compound tare weight beam, 8x14-ft. platform; weight 1400 lbs	$194.00
No. 24	—Capacity 6 tons, with compound tare weight beam, 8x14-ft. platform; weight 1500 lbs	$221.00
No. 25	—Capacity 8 tons, with compound tare weight beam, 8x14-ft. platform; weight 1800 lbs	$299.00
No. 26	—Capacity 10 tons, with compound tare weight beam, 8x14-ft. platform; weight 2000 lbs	$324.00
No. 70	—Capacity 8 tons, with compound tare weight beam, 8x22-ft. platform; weight 2500 lbs	$408.00
No. 71	—Capacity 10 tons, with compound tare weight beam, 8x22-ft. platform; weight 2600 lbs	$436.00

Pit



With this scale the entire weight is carried on the foundations in the bottom of the pit, therefore the wall and frame do not have to be of nearly as heavy construction as in scales that hang from the frames; in fact, the wall and frame is used only for keeping the dirt from caving into the pit and to surround the platform.

It requires a pit about twenty-eight inches deep, and to cheapen the construction the frame can be set on posts and boarded up to keep the dirt out of the pit. The foundations can be of timber also, but we recommend setting the scale on stone, brick or concrete.

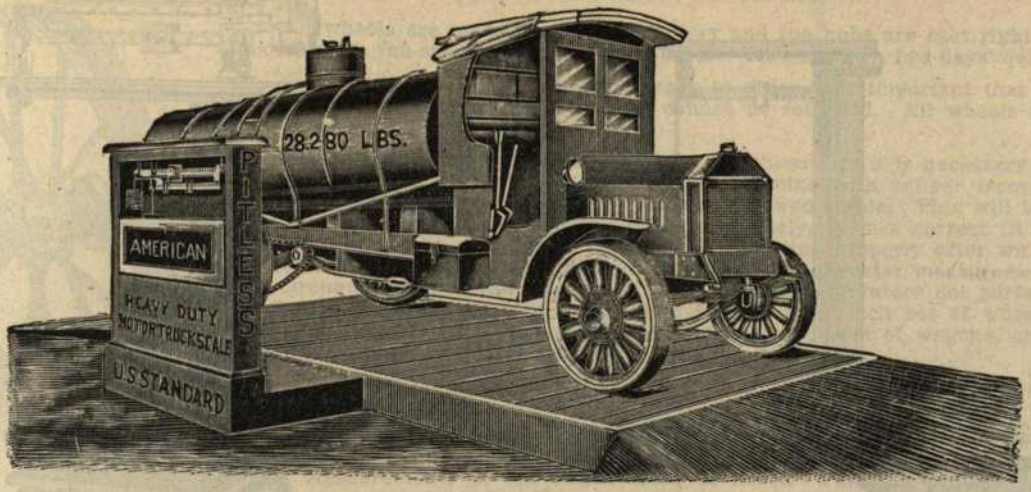
This scale has five levers. These levers are the best quality of cast iron and are made heavy enough to carry more than the capacity they are sold for, so that they cannot break, bend or spring under a load, and will never wear out. The material and workmanship is exactly the same as in our pitless scales, and the best obtainable for its purpose.

It also has the valuable ball bearing feature and while we recommend the pitless scale wherever it can be used, the pit scale is better adapted where it must be set level with the surface or where there is not room to build the approaches.

Wood parts for floor are not included with these scales.

No. 23	—Capacity 5 tons, with compound tare weight beam, 8x14-ft. platform; weight 550 lbs	$123.00
No. 44	—Capacity 6 tons, with compound tare weight beam, 8x14-ft. platform; weight 725 lbs	$161.00
No. 45	—Capacity 8 tons, with compound tare weight beam, 8x14-ft. platform; weight 800 lbs	$183.00
No. 46	—Capacity 10 tons, with compound tare weight beam, 8x14-ft. platform; weight 835 lbs	$197.00
No. 47	—Capacity 8 tons, with compound tare weight beam, 8x22-ft. platform; weight 925 lbs	$224.00
No. 48	—Capacity 10 tons, with compound tare weight beam, 8x22-ft. platform; weight 1000 lbs	$244.00

American Heavy Duty Motor Truck Scales



Pitless

These scales are built on the same general principle as the Pitless Wagon Scales except are much heavier and built especially for weighing heavy motor truck loads where the large part of the load is at one end. Very sensitive action and will weigh large or small loads accurately.

The floor joists are three heavy I beams, which are all enclosed in a heavy channel steel frame. Levers are semi-steel, fitted with steel bearings throughout. Standard compound beam. Wood parts for floor not included with these scales.

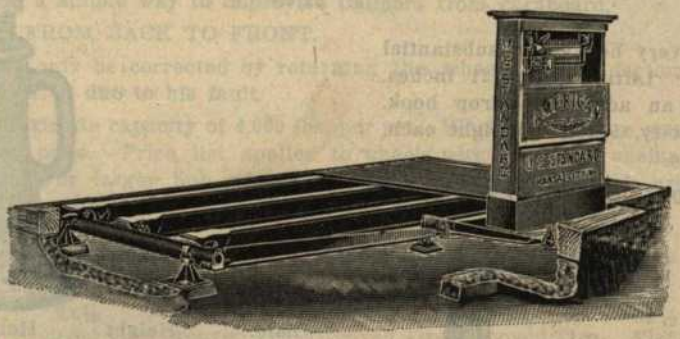
	Capacity	Size Platform	Shipping Wgt.	Each
No. 79	8 tons	8x16 ft.	2500 lbs.	$341.00
No. 80	10 tons	8x16 ft.	2700 lbs.	$406.00
No. 81	15 tons	9x18 ft.	4300 lbs.	$710.00
No. 82	20 tons	9x18 ft.	4600 lbs.	$845.00

Pit

These scales are built similar to the Heavy Duty Pitless scales shown above except are made to use in a pit and supported by stone, brick or concrete footing instead of the heavy steel frame. They have the same sensitive levers and steel bearings. Standard compound beam.

	Capacity	Size Platform	Shipping Wgt.	Each
No. 83	8 tons	8x16 ft.	1300 lbs.	$262.00
No. 84	10 tons	8x16 ft.	1420 lbs.	$275.00
No. 85	15 tons	9x18 ft.	1800 lbs.	$444.00
No. 86	20 tons	9x18 ft.	1900 lbs.	$482.00

Shallow Pit Wagon and Motor Truck Scales



These scales are practically the same as the Pit scales listed above except they are equipped with steel I beam joists. This not only makes an all steel frame construction but does not require as deep a pit and still leave the necessary clearance under the levers. The total depth of the pit is 16 inches for the 5, 6 and 8-ton sizes and 20 inches for the 10, 15 and 20-ton sizes. They have the same sensitive levers and steel bearings. Standard compound beam. Wood parts for floor not included with these scales.

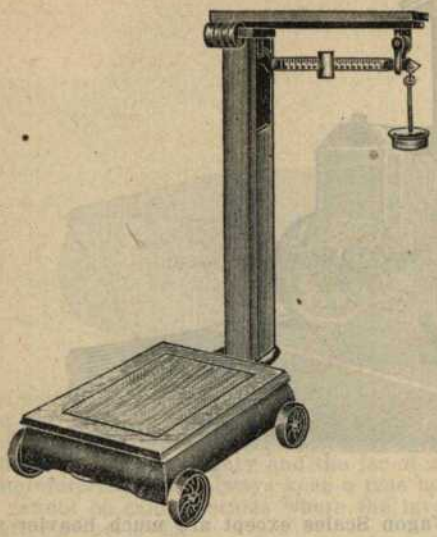
For Wagon

	Capacity	Size Platform	Shipping Wgt.	Each
No. 86S	5 tons	8x14 ft.	800 lbs.	$183.00
No. 87	6 tons	8x14 ft.	900 lbs.	$241.00
No. 88	8 tons	8x14 ft.	950 lbs.	$297.00

For Motor Trucks

	Capacity	Size Platform	Shipping Wgt.	Each
No. 89	10 tons	8x16 ft.	2100 lbs.	$396.00
No. 90	15 tons	9x18 ft.	2650 lbs.	$612.00
No. 91	20 tons	9x18 ft.	2750 lbs.	$708.00

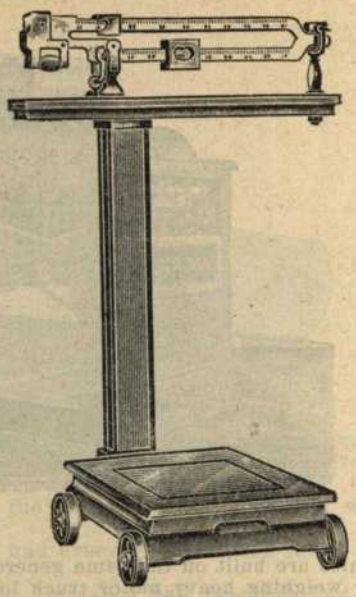
Portable Platform Scales



Weight Scales

Built with steel pivots carefully hardened and finished. Platform rests on tool steel bearings which take all the wear off the pivots. Scales always remain quick and sensitive. Solid brass weighing beam graduated in ½ lbs. with brass sliding poise. Made of the very best material and workmanship throughout. Finely finished and very accurate. Sealed to U. S. Standard.

No.	Capacity	Size Platform	Shipping Weight	Each
49	600 lbs.	16x24 ins.	150 lbs.	$36.00
50	800 lbs.	17x25 ins.	160 lbs.	$41.00
51	1000 lbs.	18x25 ins.	165 lbs.	$46.00
52	1200 lbs.	18x26 ins.	170 lbs.	$54.00

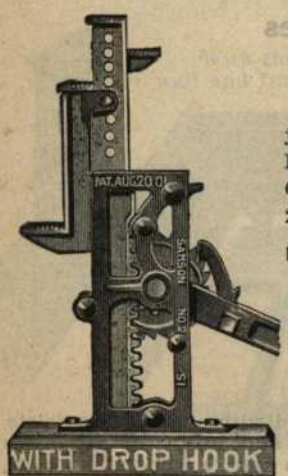


Weightless Scales

Full capacity is shown on the brass beam which consists of two bars. Upper bar with small sliding poise is graduated in ½ lb. marks up to 50 lbs. Lower bar with large poise is notched and graduated in 100 lb. marks up to the balance of the capacity of the scale. Weight readily distinguished on either side of the scale. Platform hanging practically the same as on weight scales. Accurately sealed to the U. S. Standard. Finely finished and fully guaranteed.

No.	Capacity	Size Platform	Shipping Weight	Each
53	600 lbs.	16x24 ins.	160 lbs.	$43.00
54	800 lbs.	17x25 ins.	170 lbs.	$48.00
55	1000 lbs.	18x25 ins.	180 lbs.	$53.00
56	1200 lbs.	18x26 ins.	190 lbs.	$60.00

Oliver Wagon Jacks



A very heavy and substantial jack. Lifting range 21 inches. Has an adjustable drop hook. Capacity, 5 tons. Weight each, 27 lbs.

No. 02.....Each, $12.00

Malleable iron, adjustable to any height, will raise 2½ inches with one pull of lever, lifting range 24 inches. Will raise vehicle weighing 2 tons. Weight each, 10 lbs.

No. 2W.....Each, $4.20

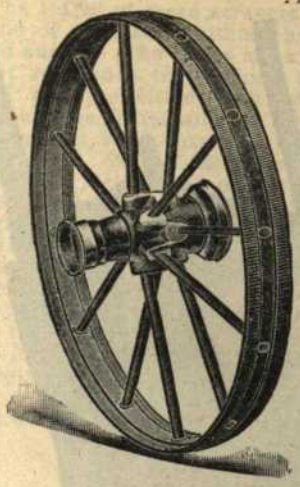
Locomotive Jack Screws

Diam. Screw Ins.	Height Stand Ins.	Height Over All Ins.	Capacity Tons	Each
1¼	8	10½	10	3.40
1¼	10	12½	10	3.80
1¼	12	14½	10	4.20
1½	8	10¾	12	4.25
1½	10	12¾	12	4.75
1½	12	14¾	12	5.25
1½	14	16¾	12	6.00
1¾	10	13	16	5.75
1¾	12	15	16	6.25
1¾	14	17	16	6.75
2	8	11½	20	6.00
2	10	13½	20	6.75
2	12	15½	20	7.50
2	14	17½	20	8.25
2	16	19½	20	9.25

In ordering give diameter of screw and height of stand.

Iron Wagon Wheels

All Orders Must Be Shipped from Factory at Havana, Ill.



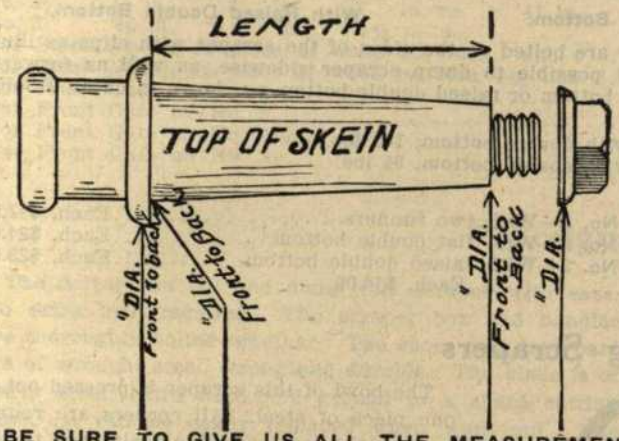
All wheels are made to order at factory and the hubs are cast right in the wheels according to the specifications on each order. This means a few days' delay in shipping.

On account of the wheels being made to order it is important that measurements be EXACT, for wheels made to sizes cannot be returned. All wheels furnished with $\frac{7}{16}$x$\frac{7}{8}$-inch oval staggered spokes.

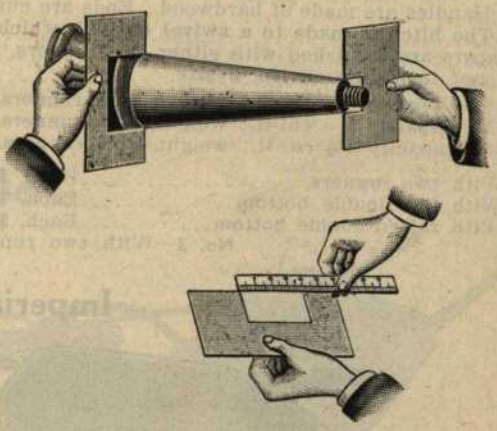
The Sketch below will show the skein measurements it is necessary to take before sending an order for Iron Wheels. Measure skeins with caliper from back to front and not from top to bottom as they wear on the under side. This will insure a proper fit. These measurements must be taken accurately, since a correct fit depends on it, and we will not be responsible for wheels not fitting properly after we have filled an order according to the measurements. Always give diameter measurements, and never the circumference, as the axle is apt to be worn and therefore not perfectly round. It is always necessary to give every measurement with each set of wheels ordered, as the length and taper of the axle vary in different makes of wagons, and even in different wagons of the same make.

Wheels are regularly furnished with style tires listed. We can ship other style tire on special order.

Unless positively certain that all the skeins are the same size, it is best to measure each skein separately. Give the measurement of the SKEIN, not of the inside of the hub. Measurements of old skeins must be exact. The factory will make necessary allowance for shrinkage and fit, in building the wheels.



BE SURE TO GIVE US ALL THE MEASUREMENTS FROM FRONT TO BACK OF SKEIN—NOT TOP TO BOTTOM.



The cut at the right shows a simple way to improvise Calipers from cardboard.

BE SURE TO MEASURE FROM BACK TO FRONT.

If an error is made, it can only be corrected by returning the wheels to the factory—which means delay and an item of expense to the customer, if due to his fault.

These wheels have an approximate capacity of 4,000 lbs. per set. Where wheels are wanted for a greater capacity they can be furnished at an extra price. Price list applies to wheels with hubs to fit skeins not larger than 3½x11, or solid axles not larger than 2½x11. For larger hub wheels or where extra heavy wheels are wanted, an extra charge will be made.

On orders for only one wheel, add 10% to list prices.

Width and Thickness of Tire, inches.

Height of Wheels Inches	3x⅜ Grooved Tire		3x½ Grooved Tire		4x⅜ Grooved Tire		4x½ Grooved Tire		5x⅜ Grooved Tire		5x½ Flat Tire		6x⅜ Grooved Tire		6x½ Flat Tire	
	Wgt. ea.	Price ea.	Wgt. ea.	Price ea.	Wgt. ea.	Price ea.	Wgt. ea.	Price ea.	Wgt. ea.	Price ea.	Wgt. ea	Price ea.	Wgt. ea.	Price ea.	Wgt. ea.	Price ea.
24	58	5.80	66	6.60	66	6.60	77	7.70	74	7.40	88	8.80	82	8.20	99	9.90
26	61	6.10	69	6.90	69	6.90	81	8.10	77	7.70	93	9.30	85	8.50	105	10.50
28	64	6.40	73	7.30	73	7.30	86	8.60	82	8.20	99	9.90	91	9.10	112	11.20
30	67	6.70	77	7.70	77	7.70	91	9.10	87	8.70	105	10.50	97	9.70	119	11.90
32	73	7.30	84	8.40	84	8.40	99	9.90	95	9.50	114	11.40	106	10.60	129	12.90
34	76	7.60	88	8.80	88	8.80	104	10.40	100	10.00	120	12.00	112	11.20	136	13.60
36	83	8.30	95	9.50	95	9.50	112	11.20	107	10.70	129	12.90	119	11.90	146	14.60
38	86	8.60	99	9.90	99	9.90	117	11.70	112	11.20	135	13.50	125	12.50	153	15.30
40	94	9.40	107	10.70	107	10.70	126	12.60	120	12.00	145	14.50	133	13.30	164	16.40
42	97	9.70	111	11.10	111	11.10	131	13.10	125	12.50	151	15.10	139	13.90	171	17.10
44	105	10.50	120	12.00	120	12.00	141	14.10	135	13.50	162	16.20	150	15.00	183	18.30

Wheels smaller than 24 inch take same list as 24 inch.

New Stowe Drag Scrapers

With Runners.

With Flat Double Bottom.

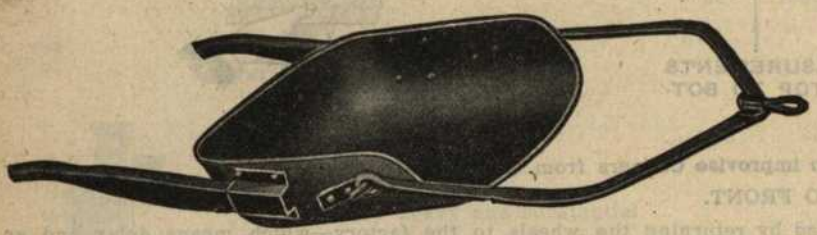
With Raised Double Bottom.

The Handles are made of hardwood. Ends are curved. They are bolted on the sides of the scraper with clips as illustrated. The hitch is made to a swivel on bail, which renders it possible to dump scraper sidewise, as well as forward. The scrapers are furnished with either two runners, flat double bottom or raised double bottom as shown in cuts. Double bottoms not furnished on No. 3 size.

No. 1—Capacity 7 cu. ft.; weight, with runners, 98 lbs.; with double bottom, 105 lbs.
No. 2—Capacity 5 cu. ft.; weight, with runners, 90 lbs.; with double bottom, 95 lbs.
No. 3—Capacity 3½ cu. ft.; weight, with runners, 76 lbs.

No. 1—With two runners.....Each, $19.00
No. 1—With flat double bottom.....Each, $23.50
No. 1—With raised double bottom.....Each, $25.50
No. 2—With two runners.....Each, $17.50
No. 2—With flat double bottom.....Each, $21.00
No. 2—With raised double bottom.....Each, $23.00
No. 3—With two runners.....Each, $14.00

Imperial Drag Scrapers



The bowl of this scraper is pressed out of one piece of steel. All corners are round, making the least possible resistance to the dirt sliding in. Handles and bail are same as on New Stowe Scrapers. Furnished with two runners as shown in cut of New Stowe Scraper. Capacity 5 cu. ft. Weight 85 lbs.

No. 2—With two runners.....Each, $18.50

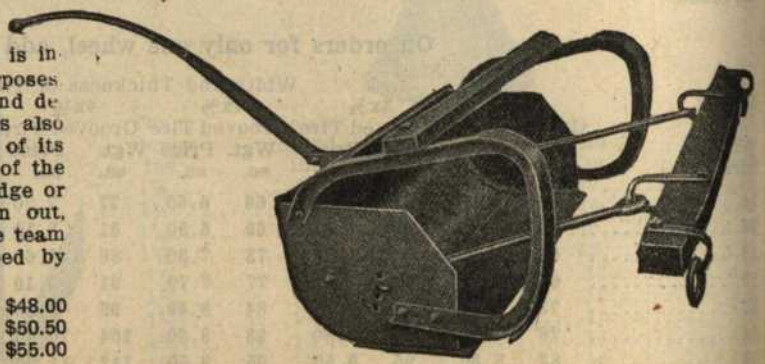
Extra Handles for Drag Scrapers

Made to fit our scrapers but can be fitted to any other make

No. 123.....Per pair, $1.30

Buck Scrapers

This scraper is useful in constructing ditches and is invaluable for leveling land, for irrigation and other purposes It is adapted to taking off a thin coating of earth and depositing and spreading in the manner needed. It is also useful in dragging earth down grade, as, on account of its width, an amount of earth larger than the capacity of the scraper can be hauled in front of it. The cutting edge or bottom can be replaced at slight cost when worn out, making the scraper practically as good as new. The team can be driven and the scraper loaded and dumped by One Man.



No. 9—3½ ft. wide, weight 250 lbs.....Each, $48.00
No. 10—4 ft. wide, weight 285 lbs.....Each, $50.50
No. 11—5 ft. wide, weight 310 lbs.....Each, $55.00

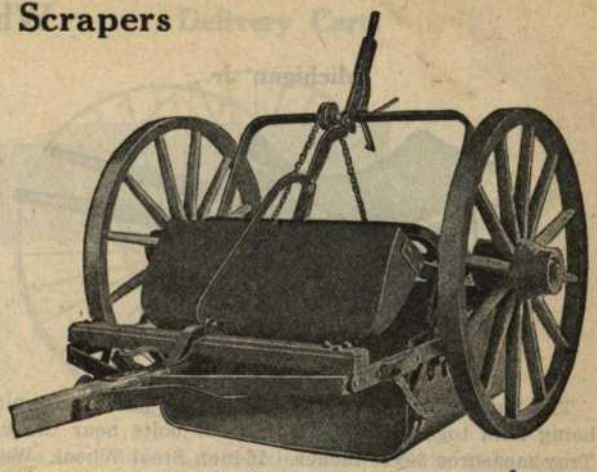
Road Grader Blades

Made of 6-inch steel, ¼-inch thick. These blades are all polished. They are made of a good grade of steel, specially adapted for the purpose. If order states the name of the grader on which the blade is to be used we will drill the holes and furnish the bolts for attaching. On open orders we will send blade not drilled. Price is the same whether drilled or blank. Furnished in three lengths.

	6 ft.	7 ft	8 ft.
Road Grader Blades.....Each,	$17.00	$19.50	$24.80

Reliable Wheeled Scrapers

The PANS of these scrapers are manufactured from a special grade of steel bent without heating, thus preserving the hardened surface. The bends are all in curved lines, which offer the least resistance to the load in entering pan. AXLES are of steel and are fitted with adjustable skein with four wearing surfaces. After all four surfaces are worn, the skein can be replaced at slight expense, the axle itself having suffered no wear at all. TONGUES are strongly braced and trussed, a very important feature and one of the points of superiority. All the levers, bails, tongue irons, draft hooks, etc., are made of steel of ample dimensions and a quality calculated to resist bending. WHEELS made from thoroughly seasoned selected stock. Great care is used in the painting to protect them against the trying climatic conditions in the various sections of the country. These scrapers are fitted with a plow steel bit formed on special dies just the shape of the pan. It is shaped so that the pan sets down into it, making a smooth surface. This preserves the life of the machine and reduces power required to load.



The gate for front of scraper is not included with the regular scrapers, but we can furnish, if desired, at an extra price as listed below.

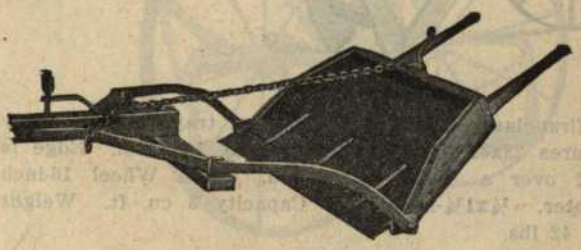
Size	Wheels, Height	Tire	Axles (Steel)	Pans, Length	Pans, Width	Pans, Depth	Pans, Capacity	Weight	Each
No. 1	36 in.	2¾ in.	1⅜ in. sq.	35 in.	35 in.	12 in.	9 cu. ft.	500 lbs.	$126.50
No. 2	42 in.	3 in.	1¾ in. ro.	37 in.	38 in.	13½ in.	13 cu. ft.	650 lbs.	$138.00
No. 2½	44 in.	3 in.	2 in. ro.	41 in.	38 in.	13½ in.	15 cu. ft.	800 lbs.	$155.50
No. 3	46 in.	3 in.	1⅞ in. sq.	41 in.	44 in.	16 in.	17 cu. ft.	850 lbs.	$172.50

For Steel Wheels in place of wood on Nos. 1 and 2 ..... Add, $ 9.00
For Steel Wheels in place of wood on Nos. 2½ and 3 ..... Add, $15.00
For Front Gate on No. 1 ..... Add, $11.50
For Front Gate on No. 2 ..... Add, $12.50
For Front Gate on No. 2½ ..... Add, $13.50
For Front Gate on No. 3 ..... Add, $15.00

Tongue Scrapers

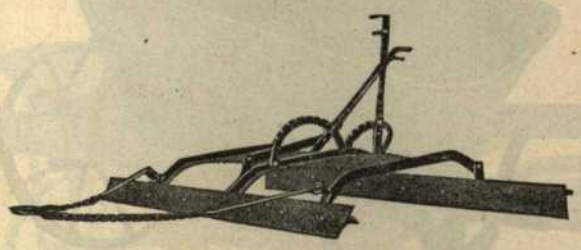
The driver can fill and dump this scraper with ease. No extra man required. The scraper box and handles are thoroughly bolted together. The shoes and draw-bars are of wrought steel, strong and durable. The blade is of heavy steel, extra hard and ground to a sharp cutting edge. It can be easily replaced when worn out. The flipper is of malleable iron.

No. 1—48-inch; weight, 120 lbs. ..... Each, $21.50



Road Drags

Royal



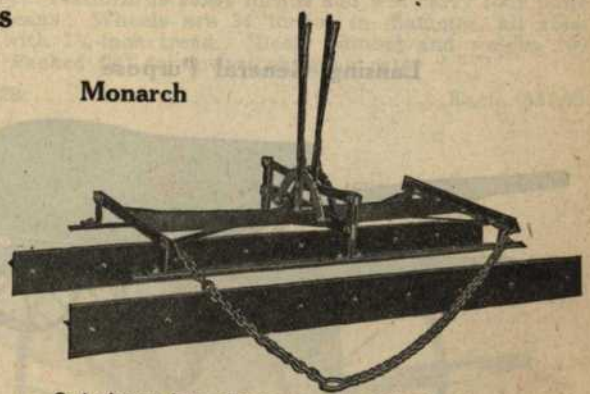
A very popular pattern.

A drag with many exclusive features. The blades are 8 feet long and 6 inches wide, offset one foot, giving a nine-foot dragging surface. Each blade adjustable independently of the other. This drag will cut off bumps and pack the dirt at the same operation. All parts forged steel. Heavy steel corrugated platform. Built with two levers and an arch frame.

Weight each, 250 lbs.

Royal Road Drag ..... Each, $51.30

Monarch



Cut shows how frame can be detached.

This drag is adaptable to any condition. Made in two sizes, 7 and 8 ft. The blades are 8 inches wide. Each blade is controlled by a separate lever, so that one can set to cut and the other to drag, or in any way that conditions may demand. The frame can be disconnected and shifted to one side if the work requires it. The chain hitch also permits using the drag at any angle. The blades are reversible, so that when one side becomes worn they may be turned over, making practically a new drag.

Weight each: 7 ft., 325 lbs.; 8 ft., 340 lbs.

7 ft. ..... Each, $56.00
8 ft. ..... Each, $57.50

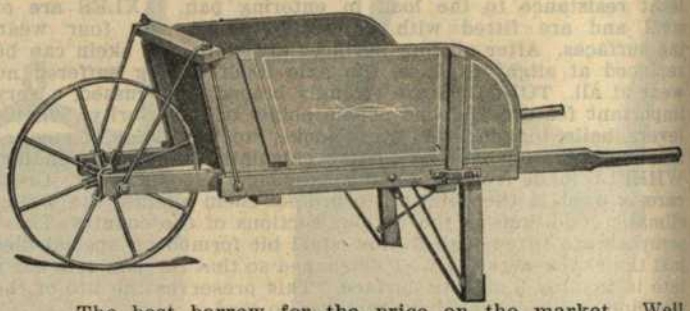
Wheelbarrows

Michigan Jr.

This barrow has a tray made of nine pieces, the pieces being held together by iron rods or bolts near the ends. Tray measures 30x36 inches. 16-inch Steel Wheel. Weight each, 47 lbs.

No. 103.....Each, $7.50

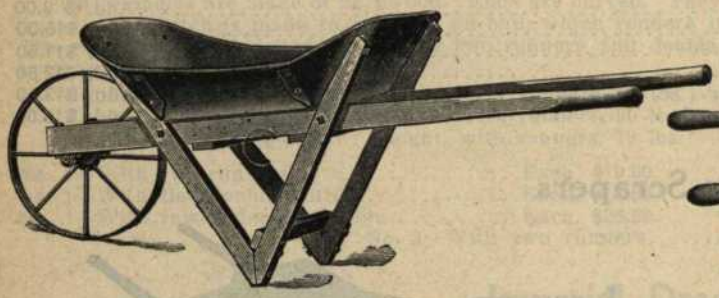
Victor



The best barrow for the price on the market. Well made and the material used is the best. Nicely finished in green. Guaranteed to give satisfaction. Handles 60 inches long; body 28 inches long; 18½ inches wide at front, 24 inches at rear and 11¾ inches deep. 20-inch steel wheel. Packed flat, but easily set up. Weight each, 47 lbs.

No. 5.....Each, $13.00

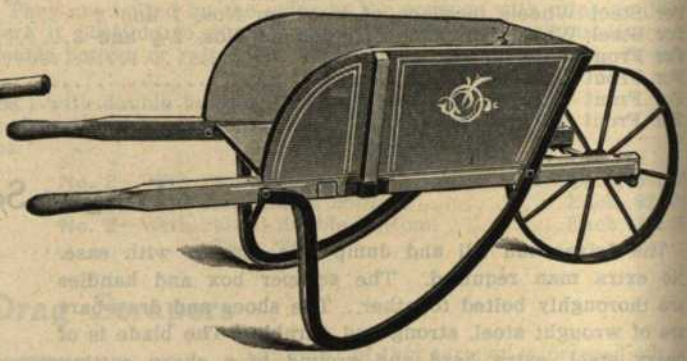
Klondyke



A first-class, well-made light steel tray barrow. Tray measures 28x32 inches. Made of No. 18 Steel. Edge is rolled over a ¼-inch steel rod. Steel Wheel 16-inch diameter. ¼x1¼-inch tire. Capacity 3 cu. ft. Weight each, 42 lbs.

No. 110.....Each, $10.50

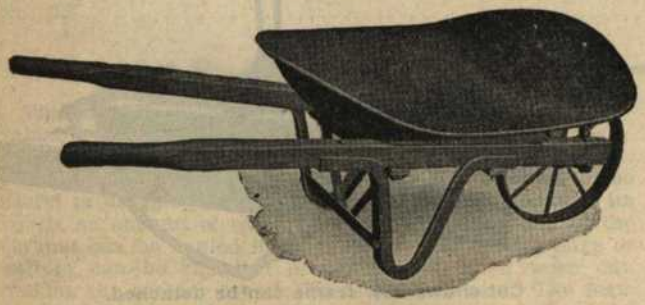
Genesee



A light, strong barrow. Well made and nicely finished in red. Handles, 58 inches long; body, 27 inches long; 17 inches wide at front, 23½ inches at rear and 12 inches deep. 22-inch steel wheel. Packed flat, but easily set up. Weight each, 45 lbs.

No. 634.....Each, $12.50

Lansing General Purpose



With angle steel legs and braces. A general purpose barrow in great demand for brick, stone, sand, gravel or any dirt or semi-wet substrances. Tray measures 33x33 ins., and is made of No. 16 steel, pressed from a single sheet without seam or rivet. The edge is rolled over a $\frac{5}{16}$-inch steel rod. Heavy steel wheel, 16 in. dia. 1¾x$\frac{5}{16}$-inch tire, running on a steel axle, firmly held by heavy lugs. Capacity, 4 cu. ft. Weight each, 64 lbs.

No. F1.....Each, $14.50

Lansing Mortar

Just the thing for contractors, cement and concrete workers. It carries a man's load. Tray made of No. 15 steel; top, 28x36 ins.; bottom, 20x21 ins.; depth at wheel, 18½ ins.; at handle, 9 ins.; has heavy rod rolled in edge. Handles are heavy, of selected hardwood. Legs and braces of angle steel. Heavy steel wheel, 16 ins. dia., running on a ⅝-inch steel axle through lugs, bolted to under side of handle. Capacity, 4½ cu. ft. Weight each, 75 lbs.

No. F4.....Each, $16.30

Wheelbarrows—Continued

Tubular Steel

The tray is pressed from one piece of steel without seams or rivets. The edges of the trays are flanged and turned over a $\frac{5}{16}$-inch steel rod. These trays are made to dump forward. They are well bolted and braced, and made of the best material and painted. Size of tray on top, 29x32 ins., made from No. 15 steel. Capacity, 3 cu. ft. Weight each, 70 lbs.

No. A2.....Each, $13.80

Tubular Steel

No. A15 barrow as illustrated is larger and heavier than No. A2. Made of 14 gauge steel. Size of tray on top, 29x36 ins.; diameter of wheel, 17 ins. Capacity, 4½ cu. feet. Weight each, 86 lbs.

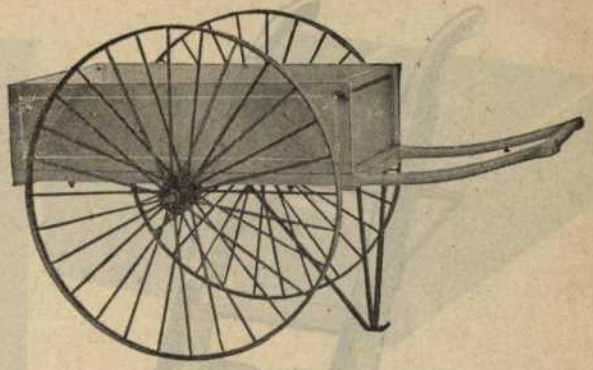
No. A15.....Each, $16.80

Tubular Steel Coal

No. A18 Coal and Coke Barrow is the same pattern as No. A15, but much larger and heavier. Made of 14 gauge steel. Size of tray on top, 33x42 ins.; diameter of wheel, 17 ins. Capacity, 430 lbs. of coal. Weight each, 100 lbs.

No. A18.....Each, $23.80

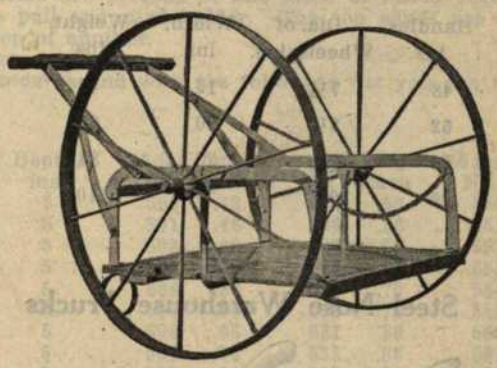
Delivery Carts



These carts have ⅞-inch axles, steel wheels, 28 spokes of $\frac{5}{16}$-inch wire; tires are of half oval steel. Packed flat for lowest shipping rate.

No.	Body, ins.	Width over all, ins.	Wheels, ins.	Tires, ins.	Weight	Each
5	32x20x 9	32	30	1⅜x$\frac{5}{16}$	70 lbs.	$27.60
6	40x24x10	40	36	1½x⅝	91 lbs.	$34.00

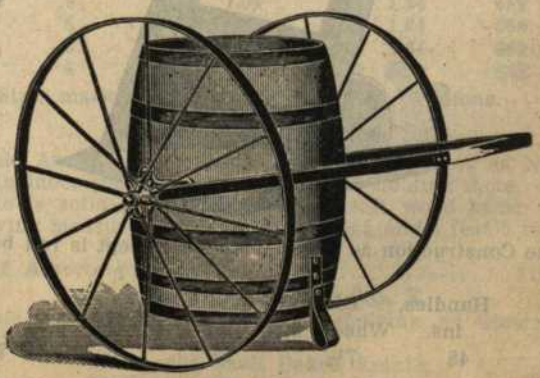
Utility Carts



A handy low down cart for universal use. All steel except the platform. Heavily constructed and strongly braced. Platform is 28x32 inches and will carry four large milk cans. Wheels are 36 inches in diameter, all steel and with 1¼-inch tread. Nicely painted and weighs 100 lbs. Packed flat for lowest shipping rate.

No. 28.....Each, $21.00

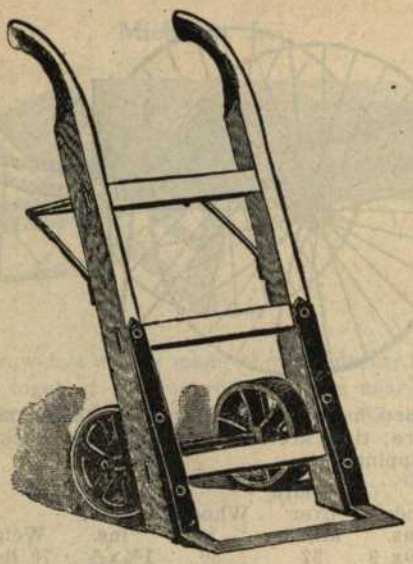
All Steel Barrel Carts



Wheels, 36x1¼x¼ inches. Weight, 65 lbs. Packed flat for lowest shipping rate. Price does not include barrel.

No. 7.....Each, $12.00

Steel Nose Warehouse Trucks

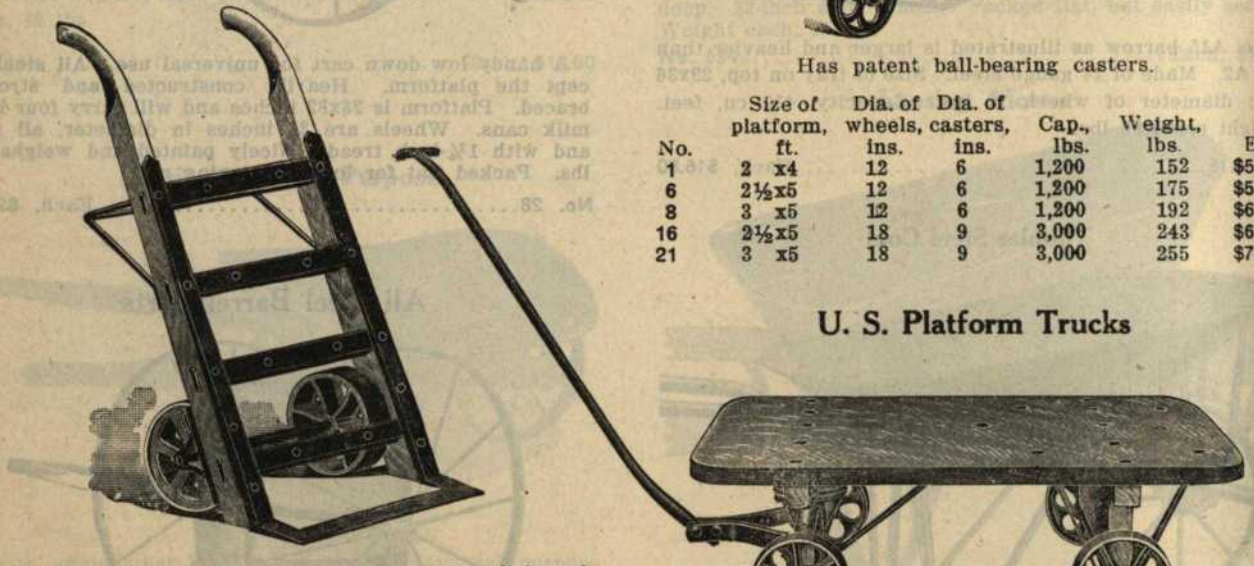


Half Bound

These trucks are firmly bolted together and have forged axles with turned bearings and steam-bent handles.

No.	Handles, ins.	Dia. of Wheels, ins.	Width, ins.	Weight, lbs.	Each
1W	48	7½	19	43	$14.50
2W	52	8½	20	60	$18.70
3W	56	9½	22	84	$24.20
4W	60	10½	24	110	$29.70

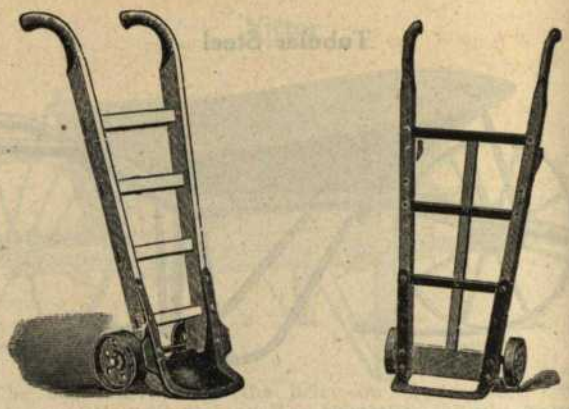
Steel Nose Warehouse Trucks



Same Construction as Nos. 1W to 4W except is full bound

No.	Handles, ins.	Dia. of Wheels, ins.	Width, ins.	Weight, lbs.	Each
21W	48	7½	19	50	$16.50
22W	49	8½	20	68	$21.60
23W	56	9½	22	87	$28.00
24W	60	10½	24	115	$33.80

Bag Trucks

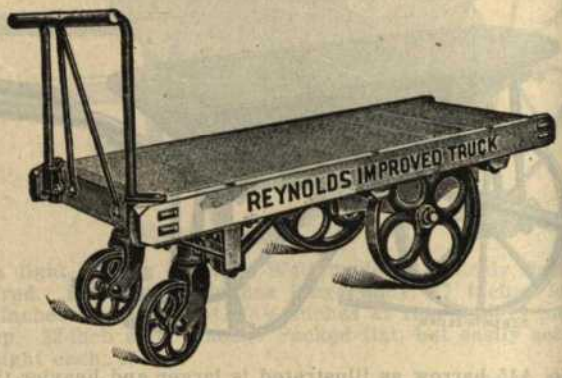


No. 50. No. 46.

No. 50 is now furnished with Steel Stamped Nose—Turned Bearings. No. 46 has regular iron nose.

No.	Length, ins.	Width at Nose, ins.	Dia. of Wheels, ins.	Weight, lbs.	Each
50	42	11¼	6	19	$ 9.00
46	46	12	6	27	$10.40

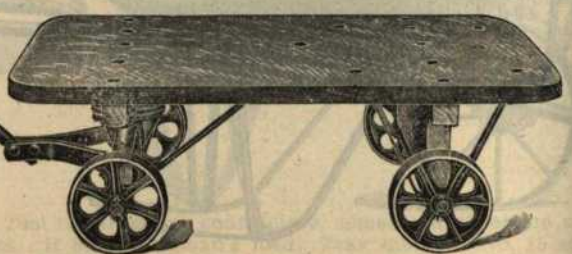
Reynolds Platform Trucks



Has patent ball-bearing casters.

No.	Size of platform, ft.	Dia. of wheels, ins.	Dia. of casters, ins.	Cap., lbs.	Weight, lbs.	Each
1	2 x4	12	6	1,200	152	$51.50
6	2½x5	12	6	1,200	175	$55.80
8	3 x5	12	6	1,200	192	$60.40
16	2½x5	18	9	3,000	243	$68.80
21	3 x5	18	9	3,000	255	$73.50

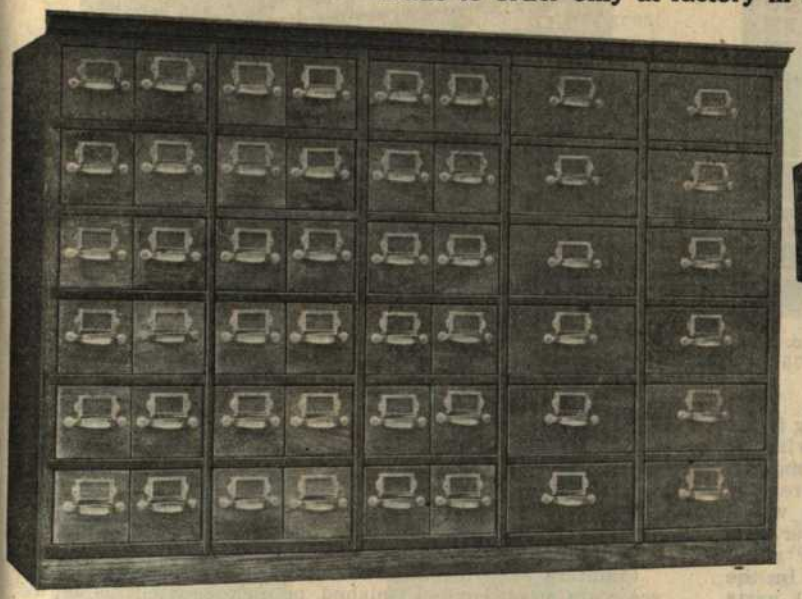
U. S. Platform Trucks



No.	Size of platform, ft.	Dia. of wheels, ins.	Weight, lbs.	Each
80	2 x3	7½	80	$33.60
82	2⅓x3⅓	7½	111	$36.00
83	2½x3½	7½	114	$38.90
84	3 x4	8½	150	$44.80

Galvanized Shelf Boxes

Made to order only at factory in Kansas City, Mo.



Steel divisions will not be furnished with the boxes unless specially ordered, as they are charged extra as follows:

Divisions for Boxes 3 inches deep.....Each, .04

Divisions for Boxes 4 inches deep.....Each, .06

Shelf Boxes add tone to your store and make it a pleasure to show goods. They are durable, convenient and practical. By using shelf boxes you know where every article is. It is an excellent plan for protecting goods against dust and injury. Stock well displayed is a Salesman in itself.

These boxes have Oak Fronts and Pine Backs. The sides and bottoms are pressed of one piece of rolled galvanized steel. The fronts are filled and varnished in Golden Oak with bronze pull and card holder. The top edges are double turned to strengthen them. This also will allow you to slide one on top of another.

The Pulls and Card Holders are always packed in one of the boxes.

Measure the space between the shelves and distance between standards and with the following list you can readily select the drawers to fill the space.

PRICE EACH

Width, ins.	Depth, ins.	12 ins. long, No.	Each	14 ins. long, No.	Each	16 ins. long, No.	Each
3	3	100	.30	125	.36	150	.42
4	3	101	.31	126	.37	151	.43
5	3	102	.32	127	.38	152	.44
6	3	103	.34	128	.40	153	.46
7	3	104	.36	129	.44	154	.52
8	3	105	.38	130	.46	155	.54
9	3	x106	.42	x131	.50	x156	.58
10	3	x107	.46	x132	.56	x157	.66
12	3	x108	.50	x133	.60	x158	.70
15	3	x109	.56	x134	.68	x159	.80
18	3	x110	.68	x135	.82	x160	.96
20	3	x111	.76	x136	.92	x161	1.08
24	3	x112	.88	x137	1.06	x162	1.24
30	3	x113	1.04	x138	1.24	x163	1.44
4	4	400	.34	425	.40	450	.48
5	4	401	.36	426	.44	451	.52
6	4	402	.38	427	.46	452	.54
7	4	403	.42	428	.50	453	.58
8	4	404	.44	429	.54	454	.64
9	4	x405	.48	x430	.58	x455	.68
10	4	x406	.56	x431	.68	x456	.80
12	4	x407	.58	x432	.74	x457	.84
15	4	x408	.64	x433	.76	x458	.88
18	4	x409	.76	x434	.92	x459	1.08
20	4	x410	.84	x435	1.02	x460	1.20
24	4	x411	.96	x436	1.16	x461	1.36
30	4	x412	1.14	x437	1.38	x462	1.62
5	5	500	.42	525	.50	550	.58
6	5	501	.46	526	.56	551	.66
7	5	502	.48	527	.58	552	.68
8	5	503	.52	528	.62	553	.72
9	5	504	.58	529	.70	554	.82
10	5	505	.64	530	.76	555	.88
12	5	506	.66	531	.80	556	.94
15	5	507	.74	532	.88	557	1.02
18	5	508	.86	533	1.04	558	1.22
20	5	509	.94	534	1.14	559	1.34
24	5	510	1.04	535	1.24	560	1.44
30	5	511	1.24	536	1.48	561	1.72
5	6	600	.48	625	.58	650	.68
6	6	601	.52	626	.62	651	.72
7	6	602	.56	627	.68	652	.80
8	6	603	.60	628	.72	653	.84
9	6	604	.66	629	.80	654	.94
10	6	605	.72	630	.86	655	1.00
12	6	606	.76	631	.92	656	1.08
15	6	607	.84	632	1.00	657	1.16
18	6	608	.96	633	1.16	658	1.36
20	6	609	1.04	634	1.24	659	1.44
24	6	610	1.12	635	1.34	660	1.56
30	6	611	1.36	636	1.64	661	1.92
36	6	612	1.60	637	1.92	662	2.24

Sizes marked x are slotted for Steel Divisions.

Assortment No. 1

This Assortment consists of the following boxes only:

80 No. 100 Shelf Boxes, 3x3x12.
16 No. 103 Shelf Boxes, 6x3x12.
8 No. 108 Shelf Boxes, 12x3x12.
16 No. 601 Shelf Boxes, 6x6x12.
8 No. 606 Shelf Boxes, 12x6x12.

When placed in four divisions with the larger boxes at the bottom and small ones at the top they occupy a space of 5 feet 5 inches high by 4 feet 5 inches wide. These measurements include the shelving made of ¾ or ⅞-inch wood, but we furnish only the boxes with Assortment No. 1.

No shelving or case is included with this Assortment.

No. 1 Assortment—128 Boxes complete without shelving or case.....$71.80

Assortment No. 2

This Assortment consists of the same boxes as No. 1, but includes the frame or shelving for holding them. This frame is solid oak front case and soft wood back. The shelving measures 5 feet 5 inches high and 4 feet 5 inches wide.

No. 2 Assortment—Complete.....$112.50

Junior Assortment No. 3

This Assortment includes the shelving as illustrated at top of page and

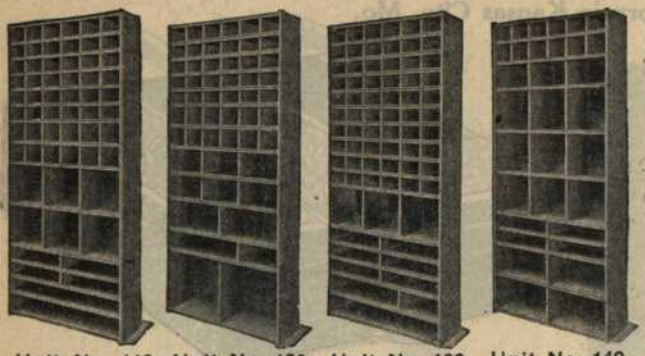
12 No. 404 Shelf Boxes, 8x4x12.
36 No. 400 Shelf Boxes, 4x4x12.

It measures approximately 4 ft. wide and 3 ft. high. Similar construction to the No. 2.

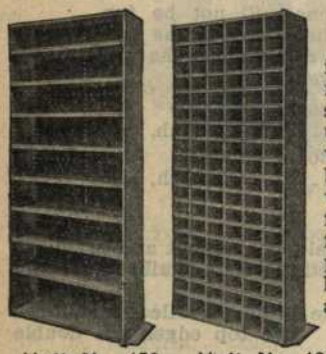
No. 3 Junior Assortment.....Each, $56.30

Lupton Unit Shelving

Steel.



Unit No. 110. Wgt. 210 lbs. Unit No. 120. Wgt. 190 lbs. Unit No. 130. Wgt. 220 lbs. Unit No. 140. Wgt. 175 lbs.



Unit No. 150. Weight 150 lbs. Unit No. 160. Weight 250 lbs.

Lupton Unit Shelving is the ideal convenience shelving. It may be used in one unit or several, as desired, to receive the odds and ends which would otherwise litter the benches and tables or go to waste on the floor. In the factory it holds small parts for assembling. In stores it permits classified stocking of hardware and miscellaneous articles.

All bins have label holders. All shelves and bins are adjustable. Finish is velvet green enamel, uniform with other Lupton Steel Equipment.

The variety of arrangements of shelves and bins makes it possible to group articles in their natural relationship by selecting suitable units.

Units are completely assembled at the factory and shipped crated. There is no erection expense.

Additional shelves and dividers can be purchased at any time.

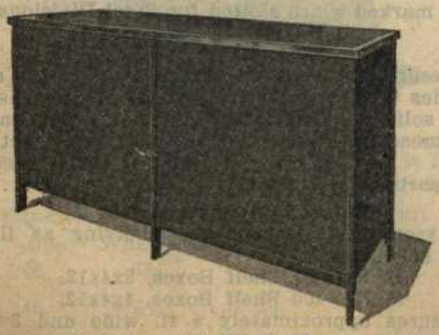
Each Unit is 3 feet wide, 7 feet high, 1 foot front to back. The divisions are as illustrated.

Unit No. 110	Each, 34.00
Unit No. 120	Each, 31.00
Unit No. 130	Each, 38.00
Unit No. 140	Each, 26.00
Unit No. 150	Each, 20.00
Unit No. 160	Each, 43.00
Extra Shelves	Each, 1.00

Extra Dividers

4½-inch	Each, .15
6 -inch	Each, .15
7½-inch	Each, .20
9 -inch	Each, .20
10½-inch	Each, .25
12 -inch	Each, .30

Send for special catalog of Steel Storage and Display Shelving.



Showing Counter with Steel Front and Ends.

Lupton Steel Counter

Showing Lupton Steel Counter, with plate glass front, in Accessory Store. Lupton Unit Shelving in background.

The Lupton Display Counter is a 100 per cent combination of serviceability in its top or working surface and display value underneath. The top is steel, covered with battleship linoleum and edged with brass molding.

The height, 40 inches, and the depth, 24 inches, are just right for working purposes and for display. The bottom shelf is raised above the floor, making a sanitary construction and avoiding the need of kick plates.

Counters are furnished with or without doors. Doors are plain steel, enamel finished, or nickel-coated inside, as ordered. Counters are regularly furnished with retainers for glass at front and ends, unless otherwise specified. They may, however, be ordered with steel front and ends if desired, or part steel front and part with glass retainers.

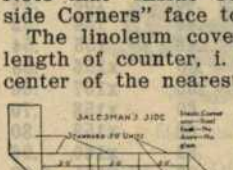
Made to use plate glass, ¼ inch thick. We can furnish the glass if ordered, but recommend that it be purchased locally. It is not included in the prices of the "units." Size of front glass, 35¾ x 32 ins. End glass, 19 x 32 ins. Outside corner glass, 32⅝ x 32 ins.

Lupton Counters are made in multiples of 3 feet, and are assembled by the user from instructions furnished.

A dimensioned sketch, looking down on the counter, with exact location of end and corner units, must accompany order. It must show which is customer's side.

Diagram below shows a typical counter, looking down. Note that "Inside Corners" face toward salesman; "Outside Corners" face toward customer.

The linoleum covering is continuous for each straight length of counter, i. e., from end to end or from end to center of the nearest corner unit, etc.



A sketch similar to this is necessary in all cases where corner units are included, to enable factory to cut the brass molding and linoleum properly. **Always indicate customer's side.**

All prices are for shipment knocked down, and include crating but not erection.

	Shipping Wt.	Each
First or Starter Unit. 2 ends for glass (glass not included) shipped with each starter unit. Only when so specified, 2 steel ends complete, will be substituted for glass ends, at no extra cost. All orders must include starter unit.	120 lbs.	28.00
Intermediate Units	100 lbs.	20.00
End Units	100 lbs.	20.00
Inside Corner Units	100 lbs.	20.00
Outside Corner Units	100 lbs.	20.00
Steel Fronts for standard 3 ft. units	18 lbs.	3.00
Steel Fronts for outside corner units	18 lbs.	3.00
Steel Backs for inside corner units (must be used when standard units have doors)	18 lbs.	3.00
Steel partitions for use between units. (Glass retainers are furnished, without charge, unless steel front and ends are specified).	11 lbs.	1.50
Steel Doors, per standard unit. (Not furnished for corner units.)	25 lbs.	6.00
Nickel-Lined Steel Doors, per standard unit (Not furnished for corner units.)	32 lbs.	10.00

Prices of "units" or sections do not include glass.

Special complete detail catalog sent on request.

Lupton Utility Cabinet

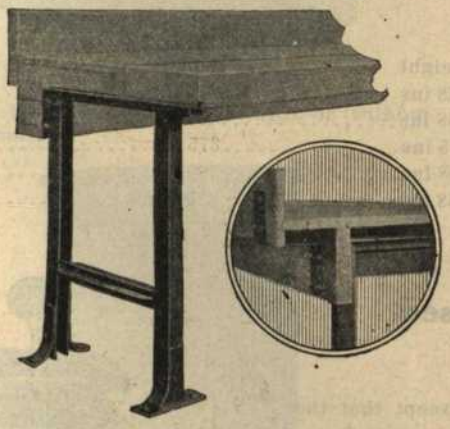
This handsome Steel Cabinet can be used in a great variety of ways in office, store and factory. It has a strong door with three-point latch controlled by a cylinder lock. Dimensions of cabinet are: Width, 36 inches; height, 75 inches; depth, front to back, 18 inches. The finish, velvet green baked enamel, makes an appearance worthy of any office.

As a wardrobe the cabinet is furnished with one shelf and a pipe rail for coat hangers For stationery, office supplies and general storage it is supplied with adjustable shelves as ordered.

Shipped fully assembled and crated. Weight 195 lbs., with one shelf and pipe rail. Extra shelves, each, 8 lbs.

Utility Cabinet with one shelf and pipe rail....Each, 40.00
Utility Cabinet less shelves. . . . . Each, 38.00
Shelves. . . . . Each, 1.25

Lupton Bench Leg



Made of pressed steel, electrically welded, light and strong. Height, 31 inches, without top. Weight, 25 lbs.

Bench Leg. . . . . Each, 3.50
Extension (shown in circle). . . . . Each, .30

Lupton Bench Drawer

Two sizes: 14 inches wide, 5 inches deep, 18 inches front to back and 14 inches wide, 6 inches deep, 24 inches front to back. Cylinder lock. Weights, small drawer, 15 lbs.; large drawer, 22 lbs. Tray, extra, 2 lbs.

Drawer 18 inches front to back. . . . . Each, 4.50
Drawer 24 inches front to back. . . . . Each, 5.50
Tray, extra. . . . . Each, .40

Lupton Foreman's Desk

Made of steel same as other Lupton products.

Reinforced top, cylinder lock. Dimensions, 36 inches wide, 43½ inches high at front, 28 inches deep. Weight, 150 lbs.

Each
Foreman's Desk 28.50

Lupton Spring and Bar Rack

A simple, substantial rack for holding springs, spring leaves, axles, steering rods and similar parts. Made of steel angle bars riveted and welded together and strong enough to carry virtually any load which may be placed upon it. Base has holes for lag screws. Size at base, 22 by 22 inches; height, 7 feet. Finish, velvet green baked enamel. Weight, 110 lbs.

Spring and Bar Rack. . . . . Each, 20.00

Lupton Tool Stand

Drawer has cylinder lock. Stand is permanently assembled by electric welding and is shipped crated.

Finish: Velvet green baked enamel.

Dimensions: 36 inches high, 20 inches wide, 20 inches front to back. Weight, crated, 55 lbs.

Tool Stand. . . . . Each, 11.00

Lupton Tool Cabinet

Shelves are adjustable on 3-inch centers. Cylinder lock is master-keyed on same system as Utility Cabinet, Tool Stand and Bench Drawer.

Finish: Velvet green baked enamel.

Dimensions: 24 inches wide, 36 inches high, 16 inches deep. Weight, crated, 90 lbs.

Tool Cabinet. . . . . Each, 18.50

Special complete detail catalog sent on request.

Revolvo Sectional Revolving Nail Bins

Shipped from Factory Only, Wellston, Ohio.

A very profitable fixture in any store. Neat and attractive appearance. Made entirely of steel and iron. Upright is of best steel tubing. Each section revolves independently on ball bearings.

The 1924 model Bins are the same as the regular model, except the Sections are not as high, permitting as many as six sections to be used in one unit. Each section has five compartments.

Regular Model Nail Bins.

No.	Total Sections	Total Compartments	Diameter	Height Over All	Gross Weight	List Price
23	3	15	48 ins	44 ins	300 lbs	114.30
24	4	20	48 ins	58 ins	350 lbs	133.00
25	5	25	48 ins	71 ins	400 lbs	150.00
13	3	15	45 ins	44 ins	300 lbs	100.00
14	4	20	45 ins	58 ins	350 lbs	114.00
15	5	25	45 ins	71 ins	400 lbs	127.00
30	3	30	45 ins	44 ins	370 lbs	115.00
40	4	40	45 ins	58 ins	400 lbs	129.00
50	5	50	45 ins	71 ins	425 lbs	150.00

1924 Model Nail Bins.

No.	Total Sections	Total Compartments	Diameter	Height Over All	Gross Weight	List Price
15A	3	15	48 ins	40 ins	300 lbs	114.30
20A	4	20	48 ins	52 ins	325 lbs	133.00
25A	5	25	48 ins	64 ins	360 lbs	150.00
30A	6	30	48 ins	76 ins	400 lbs	170.00

Scales, scoop, chain and scale arm on each of the above numbers.....Extra, 12.00

Revolvo Display Stands

Shipped from Factory Only, Wellston, Ohio.

These are made on the same general principle as the Nail Bins except they have flat shelves instead of the compartments, and are especially adapted to displaying various lines of merchandise. Each shelf is divided into sections for displaying different lines. No. 534A is same as No. 534, except an extra ring is placed above each shelf to hold goods in place.

No.	Total Sections	Total Compartments	Diameter	Height	Gross Weight	List Price
655	6	30	39 ins	68 ins	425 lbs	135.00
555	5	25	48 ins	68 ins	450 lbs	125.00
544	4	20	48 ins	55 ins	375 lbs	110.00
534	5	25	34 ins	68 ins	300 lbs	90.00
534A	5	25	34 ins	68 ins	325 lbs	90.00

Revolvo Bolt, Screw and Auto Part Cases

Shipped from Factory Only, Wellston, Ohio.

These are made on the same general principle as the Nail Bins, except that the compartments are smaller and are particularly adapted for Screws, Bolts, Auto Parts, etc.

In the No. 100 the compartments are 4½ inches wide, 7 inches long, tapering to center, 3 inches deep.

In the Nos. 66 to 70 the compartments are 7 inches wide, 12 inches long, tapering to center, 6 inches deep.

No.	Total Sections	Total Compartments	Diameter	Height	Gross Weight	List Price
100	10	100	18 ins	44 ins	150 lbs	90.00
66	6	72	26 ins	42 ins	280 lbs	92.85
67	7	84	26 ins	48 ins	310 lbs	100.00
68	8	96	26 ins	54 ins	340 lbs	107.15
69	9	108	26 ins	60 ins	370 lbs	114.30
70	10	120	26 ins	66 ins	400 lbs	121.45

No. 1, 2, 3 Screw.

Made in three sizes with drawers labeled with the size screw for which they are intended.

No. 10, 12, 14.

With blank drawer fronts with or without label holders.

No. 5, 6 Bolt.

Made in two sizes with drawers labeled for various sizes of tire a[illegible]rriage bolts for which they are intended

Revolving Bolt and Screw Cases

From Factory Only, Dayton, Ohio.

These cases are made of poplar wood, cherry stained. They save much time in handling screws, bolts and other small items.

No. 1 is 33 inches high and 21 inches wide, containing 72 drawers labeled for the following sizes of screws:

⅛ inch x 3, 4, 5, 6, 7.
⅜ inch x 5, 6, 7, 8.
¾ inch x 5, 6, 7, 8, 9.
⅞ inch x 7, 8, 9, 10.
1 inch x 6, 7, 8, 9, 10, 11, 12, 13, 14.
1¼ inch x 7, 8, 9, 10, 11, 12, 13, 14, 15.
1½ inch x 8, 9, 10, 11, 12, 13, 14, 15, 16.
1¾ inch x 9, 10, 11, 12, 13, 14, 15, 16, 17.
2 inch x 10, 11, 12, 13, 14, 15, 16, 17, 18.
2½ inch x 12, 13, 14, 15, 16.
3 inch x 16, 18, 20, 22.

No. 1—Weight, 125 lbs.....Each, 50.00

No. 2 is 36 inches high and 21 inches wide, containing 80 drawers labeled for the following sizes of screws:

⅜ inch x 2, 3, 4.
½ inch x 3, 4, 5, 6, 7.
⅝ inch x 4, 5, 6, 7, 8.
¾ inch x 4, 5, 6, 7, 8, 9, 10.
⅞ inch x 6, 7, 8, 9, 10, 11.
1 inch x 6, 7, 8, 9, 10, 11, 12, 13, 14.
1¼ inch x 7, 8, 9, 10, 11, 12, 13, 14, 15.
1½ inch x 8, 9, 10, 11, 12, 13, 14, 15, 16.
1¾ inch x 9, 10, 11, 12, 13, 14, 15, 16, 17.
2 inch x 10, 11, 12, 13, 14, 15, 16, 17, 18.
2½ inch x 12, 13, 14, 15, 16.
3 inch x 16, 18, 20, 22.

No. 2—Weight, 125 lbs.....Each, 56.50

No. 3 is 39 inches high and 24 inches wide, containing 88 drawers labeled for the following sizes of screws:

¼ inch x 1, 2.
⅜ inch x 2, 3, 4, 5.
½ inch x 3, 4, 5, 6, 7.
⅝ inch x 4, 5, 6, 7, 8, 9.
¾ inch x 4, 5, 6, 7, 8, 9, 10.
⅞ inch x 6, 7, 8, 9, 10, 11, 12.
1 inch x 6, 7, 8, 9, 10, 11, 12, 13, 14, 15.
1¼ inch x 7, 8, 9, 10, 11, 12, 13, 14, 15.
1½ inch x 8, 9, 10, 11, 12, 13, 14, 15, 16.
1¾ inch x 9, 10, 11, 12, 13, 14, 15, 16, 17, 18.
2 inch x 10, 11, 12, 13, 14, 15, 16, 17, 18.
2½ inch x 12, 13, 14, 15, 16.
3 inch x 16, 18, 20, 22.

No. 3—Weight, 225 lbs.....Each, 62.00

Nos. 10, 12 and 14 are the same as Nos. 1, 2 and 3 except the drawers are not labeled and can be used for cap screws, machine bolts, or small parts of any kind.

	Without Label Holders	With Label Holders
No. 10—Same size as No. 1; weight 125 lbs.	50.00	57.00
No. 12—Same size as No. 2; weight 125 lbs.	56.50	60.00
No. 14—Same size as No. 3; weight 225 lbs.	62.00	65.00

No. 5 is 60 inches high and 30 inches wide, containing 98 drawers labeled for the following:

Tire Bolts

⅛ inch x 1¼, 1½, 1¾, 2, 2¼, 2½, 2¾, 3
¼ inch x 1¼, 1½, 1¾, 2, 2¼, 2½, 2¾, 3.
⅛ inch x 2, 2¼, 2½.

Carriage Bolts

¼ inch x 1¼, 1½, 1¾, 2, 2¼, 2½, 2¾, 3, 3¼, 3½, 3¾, 4. 4¼, 4½, 4¾, 5.
⅛ inch x 1¼, 1½, 1¾, 2, 2¼, 2½, 2¾, 3, 3¼, 3½, 3¾, 4. 4¼, 4½, 4¾, 5, 5¼, 5½, 6.
⅜ inch x 2, 2¼, 2½, 2¾, 3, 3¼, 3½, 3¾, 4, 4¼, 4½, 4¾, 5, 6.
⅛ inch x 2, 2½, 3, 3½, 4, 4½, 5, 5½, 6, 6½, 7, 8, 9. 10.
½ inch x 2, 2½, 3, 3½, 4, 4½, 5, 5½, 6, 6½, 7, 8, 9, 10, 11. 12.

No. 5—Weight, 350 lbs.....Each, 102.00

No. 6 is 65 inches high and 30 inches wide, containing 104 drawers. Contains the following sizes in addition to No. 5:

⅛ inch—7½, 8½, 9½.
½ inch—7½, 8½, 9½.

No. 6—Weight, 360 lbs.....Each, 110.50

Tool Racks

"Well Displayed Is Half Sold"

It is one of the axioms of good salesmanship that articles should be displayed in a manner which recognizes their value. The goods that are given prominence; which seem to be displayed with pride in their appearance, command the special attention of all who enter the store. These Racks change the whole appearance of a store by bringing important lines to the front, displaying them to the best advantage, yet in a space so small that no other stock is slighted.

The Herrick Revolving Tool Rack

Malleable iron and steel, ball bearing, revolves easily with full load. Capacity 15½ dozen tools. Painted black. Height 9½ ft. Diameter floor space 2½ ft. Extreme diameter of bracket arms 4 ft. Weight 220 lbs.

Capacity
24 Steel Garden Rakes
12 Potato or Manure Hooks
12 Steel Hoes
18 L. H. Shovels or Spades
24 L. H. Hay or Manure Forks
24 D. H. Forks
12 D. H. Spading Forks
12 D. H. Spades
12 D. H. Scoops
36 D. H. Shovels

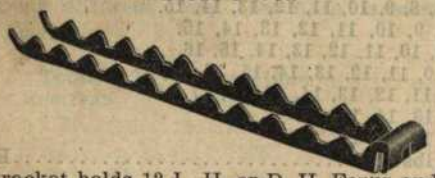
Standard Bracket Equipment
10 No. 6 for L. H. or D. H. Forks and Shovels
2 No. 6½ for L. H. Shovels, Spades and Handled Axes.
2 No. 7 for Steel Garden Rakes
2 No. 8 for Steel Hoes
4 No. 10 which is a special bracket as an extra support for L. H. Tools

Each Bracket holds 1 dozen except No. 6½, which holds 9 L. H. Shovels or Spades.

No. A. . . . . . **Each, 60.00**

Tool Brackets

Malleable Iron



No. 6 Bracket holds 12 L. H. or D. H. Forks and Shovels. Length, 19 inches. Weight per dozen, 27 lbs.

No. 6 . . . . . **Per doz., 12.00**

No. 6½ Bracket is similar to No. 6 except it holds 9 L. H. Shovels, Spades and Handled Axes. Length, 18¼ inches. Weight per dozen, 27 lbs.

No. 6½ . . . . . **Per doz., 13.00**

No. 7 Bracket holds 12 Steel Garden Rakes. Length, 21¼ inches. Weight per dozen, 24 lbs.

No. 7 . . . . . **Per doz., 12.50**

No. 8 Bracket holds 12 Steel Hoes or 12 Hook Tools. Length, 22 inches. Weight per dozen, 20¼ lbs.

No. 8 . . . . . **Per doz., 10.00**

Wall Support for holding Brackets Nos. 6, 6½, 7 or 8. Weight per dozen, 4⅛ lbs.

No. 12 . . . . . **Per doz., 3.00**

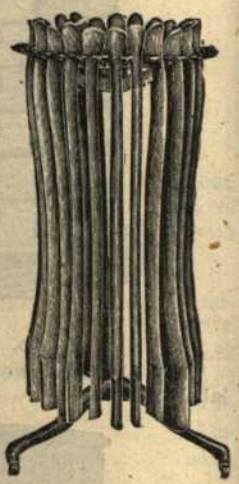
"Dunbar" All-Purpose Racks

Made of steel and iron, all heads are malleable iron, and are guaranteed against breakage. Mounted on easy rolling casters, adjustable as to height.

For Axes

Holds them securely with handles straight up and down. Capacity 24 Axes. Weight 45 lbs.

No. D . . . . . **Each, 18.00**



For Axe Handles or Ball Bats

Can be used in Winter for Axe Handles, or Summer for Baseball Bats. Capacity 24 Axe Handles or 24 Ball Bats. Weight 50 lbs.

No. G . . . . . **Each, 18.00**

For Steel Goods and Lawn Mowers

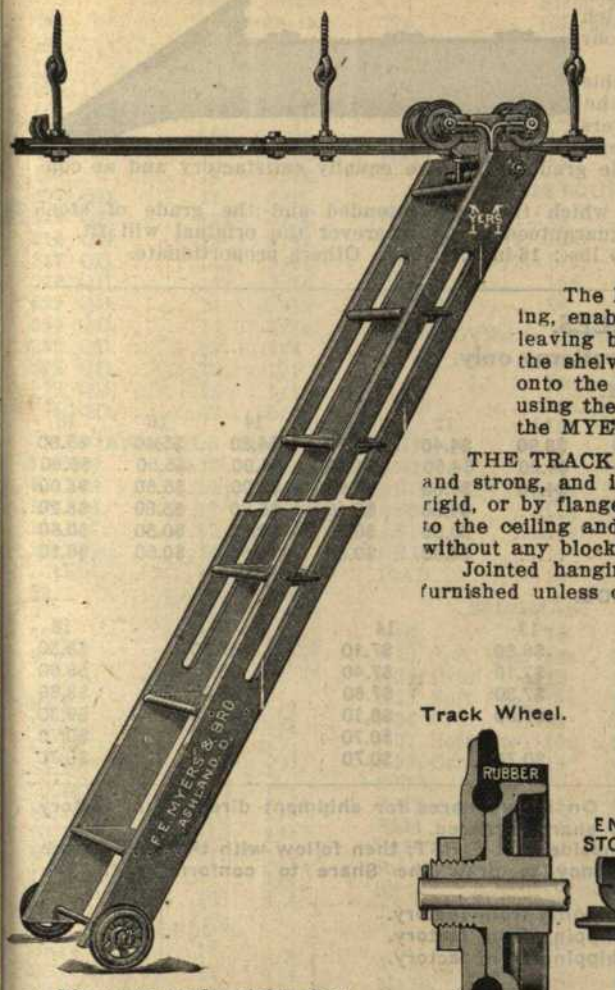
A Combination Rack to be used where a smaller one is wanted than the No. A. For Forks, Shovels, Hoes and Rakes or by removing the rods Lawn Mowers can be displayed. Capacity 48 pieces of Steel Goods or 6 Lawn Mowers. Weight 75 lbs.

No. H . . . . . **Each, 24.00**

Note.—L. H. denotes Long Handle. D. H. denotes "D" Handle.

MYERS CUSHION TIRE STORE LADDERS

From Factory Only, Ashland, Ohio.



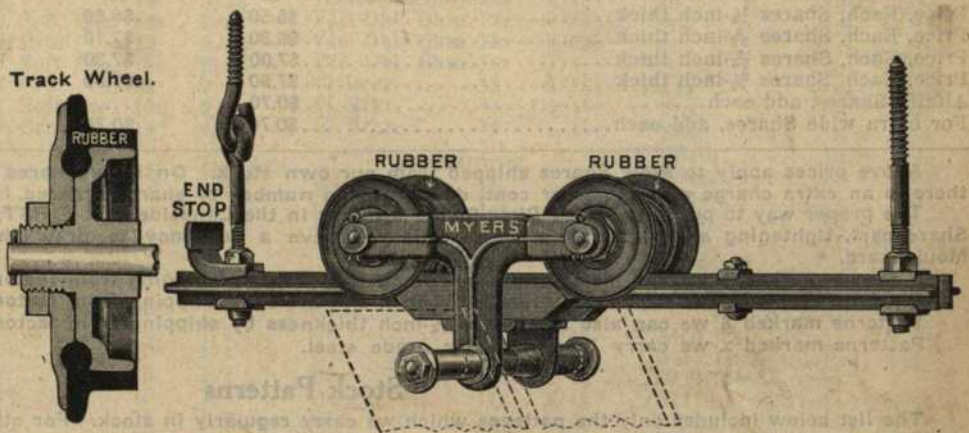
This illustrates the Myers Cushion Tire Store Ladder, showing the Track, Hanging Hook, End-Stop, Upper and Lower Trolleys, all complete and mounted ready for use.

The Ladder is constructed of the best clear Georgia pine, nicely finished and varnished, showing the natural wood. Has open panel sides, 5 inches wide. Steps have 5½-inch tread. The Ladder measures 12 inches in width. The Trolley is self-adjusting with 3-inch rubber faced wheels. The Floor Travelers are 5 inches in diameter, fitted with rubber tires.

The Ladder suspended from the ceiling and running sidewise to the shelving, enables the user to mount the ladder the same as he would a stairway, leaving both hands free. This is a decided advantage over a ladder facing the shelving, for the reason that in such ladders the user is obliged to hold onto the ladder with one hand in ascending and descending. Any one after using the two different style ladders will, without question, decide in favor of the MYERS, owing to the above reasons.

THE TRACK is the well known Myers double angle steel rail, which is very neat and strong, and is suspended from ceiling by means of lag screws, either jointed or rigid, or by flanged plates and wood screws. By this means the track is placed close to the ceiling and can be leveled on an uneven ceiling without the least trouble and without any blocking or bridging, as is the case in many other tracks.

Jointed hanging hook, as shown in cut at the left, is recommended and always furnished unless others are specified.



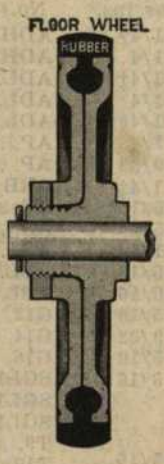
The cuts at the right show sectional views of the most important parts.

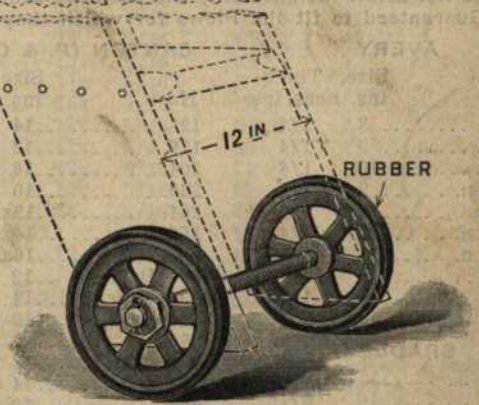
The Track Wheel as used on the overhead track on Myers Store Ladder is 3 in. in diameter. The cut illustrates the wheel in all its details. It is made of two parts which clamp around the enlarged portion of the rubber tire, and are held together by means of a nut and strong thread, holding the tire securely in position and preventing it from expanding or getting out of position under any circumstances. The wheel revolves on a turned steel axle.

The Floor Wheel as used on Myers Store Ladders is constructed exactly the same as the Trolley Wheel above described. It is 5 inches in diameter.

The Rubber Tires used on Myers Store Ladders are made of a specially prepared rubber, shaped according to a patented design. Are held securely in position by the wheel castings. By means of these Rubber Tires the ladder is made practically noiseless. They also do away with any jar or unpleasant sensation in running the ladder over an uneven surface.

Each of the intermediate steps are fastened at each end with a Patented Malleable Dowel Tee. The Dowel Tee engages the outer side of the ladder frame, passes through underneath the step, and is attached by means of a heavy screw, thus preventing the ladder from spreading or springing away from the end of the step. The tread of the step is 5½ inches deep.





DIRECTIONS FOR ORDERING STORE LADDER.

Give us the exact height of the ceiling and the length of each track, and we will do all the fitting at the factory. If the height of the ceiling varies, give us the height of ceiling at each end and center of each run of track.

All Store Ladders, Track, etc., from factory only, Ashland, Ohio. Prices F. O. B. factory.

Ladder and trolley, complete	$40.60
Track with hangers	Per foot, $ 0.56

Fitted and Bolted Plow Shares

We aim to carry in stock all patterns for which there is any demand. We are listing separately the patterns carried in stock and those which are furnished by shipping from factory. New patterns are added to our stock as demand warrants.

The items listed as stock patterns are regularly carried in Crucible grade steel. However, those items which are marked x following the size are carried also in Soft Center grade steel. Most plow manufacturers having general distribution use Soft Center Shares as regular equipment. In most sections of this Southwestern territory, however, the Crucible grade will prove equally satisfactory and at considerably lower cost.

Orders should state the number and size as well as the plow for which they are intended and the grade of steel wanted. All Shares are exact duplicates of the originals and are guaranteed to fit wherever the original will fit.

Approx. average weight ¼-inch Shares, 12-inch, 9 lbs.; 14-inch, 10 lbs.; 16-inch, 12 lbs. Others proportionate.

PLOW SHARE PRICES.

These prices apply to stock patterns only.

CRUCIBLE GRADE.

Size, inches	7	8	9	10	11	12	13	14	16	18
Price, Each, Shares ¼-inch thick	$2.70	$2.80	$3.20	$3.40	$3.90	$4.40	$4.70	$4.80	$5.40	$5.80
Price, Each, Shares 5/32-inch thick	$2.80	$2.90	$3.30	$3.50	$4.00	$4.50	$4.80	$4.90	$5.50	$5.90
Price, Each, Shares 11/64-inch thick	$2.90	$3.00	$3.40	$3.60	$4.10	$4.60	$4.90	$5.00	$5.60	$6.00
Price, Each, Shares ⅜-inch thick	.....	.....	.....	.....	.....	$4.80	$5.10	$5.20	$5.80	$6.20
Alfalfa Shares, add each	.....	.....	.....	.....	.....	$0.50	$0.50	$0.50	$0.50	$0.50
For extra wide Shares, add each	.....	.....	.....	.....	.....	$0.50	$0.50	$0.50	$0.50	$0.50

SOFT CENTER GRADE.

Size, inches	12	13	14	16	18
Price, Each, Shares ¼-inch thick	$6.50	$6.80	$7.10	$7.70	$8.30
Price, Each, Shares 5/32-inch thick	$6.80	$7.10	$7.40	$8.00	$8.60
Price, Each, Shares 11/64-inch thick	$7.00	$7.30	$7.60	$8.20	$8.80
Price, Each, Shares ⅜-inch thick	$7.50	$7.80	$8.10	$8.70	$9.30
Alfalfa Shares, add each	$0.70	.....	$0.70	$0.70	$0.70
For extra wide Shares, add each	$0.70	$0.70	$0.70	$0.70	$0.70

Above prices apply to Plow Shares shipped from our own stock. On Plow Shares for shipment direct from factory there is an extra charge of 5 to 10 per cent, dependent on number of shares ordered.

The proper way to put on a Fitted Plow Share is to put in the Landside Bolt FIRST, then follow with the bolts in the Share part, tightening all a little at a time. This will have a tendency to draw the Share to conform with the Mouldboard.

Patterns marked † we can also furnish in ¼-inch thickness by shipping from factory.
Patterns marked ‡ we can also furnish in 5/32-inch thickness by shipping from factory.
Patterns marked § we can also furnish in 11/64-inch thickness by shipping from factory.
Patterns marked x we carry in soft center grade steel.

Stock Patterns

The list below includes only the patterns which we carry regularly in stock. For other numbers see factory shipment list. Guaranteed to fit the Plows for which they are intended, as listed.

AVERY

No.	Size, ins.	Thickness, ins.
IBL	8	1/4
IBL	9	1/4
IBL	10	1/4
Paragon	9	1/4
Paragon	10	1/4
Paragon	12	1/4
Paragon	14	1/4
Texas	10	1/4
Texas	12	1/4
Texas	14	1/4

BRADLEY.

No.	Size, ins.	Thickness, ins.
19-127	12	5/16
19-167	16	5/16
L33	12	1/4§
L45	14	1/4§
L70	16	1/4§
T47	14	5/16

CANTON (P. & O.).

No.	Size, ins.	Thickness, ins.
42	14x	1/4§
46	12x	1/4§
48	11	1/4
50	10	1/4
54	16x	1/4§
62	9	1/4
64	10	1/4
66	12	1/4‡
110	16	1/4
112	14	1/4‡

CANTON (P. & O.) Cont.

No.	Size, ins.	Thickness, ins.
128	14	1/4‡
176	12	1/4
204	16	1/4‡
230	10	1/4
264	12x	1/4§‡
266	14x	1/4§
268	16x	9/32
324 Brkr.	12	1/4‡
334 Brkr.	14	5/16‡
344 Brkr.	12	5/16
356	9	1/4
390	12	5/16
392	14	5/16
454	12	5/16
454 QD.	12	9/32
462 QD.	14x	5/16
466 QD.	16x	5/16

CASADAY.

No.	Size, ins.	Thickness, ins.
513 Horn (Ex. Wide)	12	5/16
515 Horn (Ex. Wide)	14	5/16
517 Horn (Ex. Wide)	16	5/16

CASE.

No.	Size, ins.	Thickness, ins.
AA	14	1/4§
AA	16	1/4
ADH QD.	14	5/16

CASE—Cont.

No.	Size, ins.	Thickness, ins.
ADHL	12	5/16
ADHL	14	5/16
ADL	12x	5/16
ADL	14	5/16‡
ADL	16	5/16‡
AP	14x	1/4§
AP	16	1/4‡§
ARB Brkr.	14	5/16
AS	12x	1/4‡
AS	14x	1/4§
AS	16x	1/4§
ASL	14x	9/32§
ASL	16x	9/32
G12	12x	9/32
G14	14x	1/4§
G16	16x	5/16
SGL12	12	9/32
SGL14	14	9/32
SGL16	16	9/32
T9	9	1/4
T10	10	1/4
T12	12	1/4
T14	14	1/4
TE12	12	1/4
TE14	14	1/4

DEERE.

No.	Size, ins.	Thickness, ins.
DBF Brkr.	14	5/16†
F11	11	1/4
F10	10	1/4

DEERE—Cont.

No.	Size, ins.	Thickness, ins.
P33	14	1/4§
PF14 Brkr.	14	1/4§
U12	12	1/4
X13	13	9/32
X41	13	5/16‡
X42LH	14	9/32
Y41LH	12	5/16‡
015	14	9/32
037	9	1/4
038	11	1/4
039	8	1/4
043	13	5/16‡
049	10	1/4
054	14x	9/32
059	12	1/4
13	13	1/4‡§
31	12x	1/4‡§
33	14x	1/4‡§
40	16x	1/4‡§
42	14x	1/4‡§
43	12	1/4
46	16x	1/4§
48	12x	1/4‡
94LH	14x	5/16‡
95LH	16x	5/16
97LH	12x	5/16
107	14x	9/32
110	16x	9/32
135	12x	9/32
143	14	1/4

Stock Patterns—Fitted and Bolted Plow Shares—Continued

DEERE—Cont.

No.	Size, ins.	Thickness, ins.
151	13	5/16
152	12x	5/16
157	14x	5/16
161	13x	5/16
162	16x	5/16
182	12	5/16
183	14	5/16
207 QD	14	5/16
215 QD	12x	5/16
216 QD	13	5/16
217 QD	14x	5/16
218 QD	16x	5/16
229 QD	14	9/32
250 QD	14	3/8
259 QD	12	1/4
278 QD	10	1/4
279 QD	11	1/4
295 QD	12	5/16

DEFIANCE (La Crosse).

LAX04	12	9/32†
LAX04	14	9/32§
LAX04	16	9/32†§
LAX07	12	9/32†
LAX07	14	9/32
LAX07	16	9/32
92	16	1/4‡
97	12	9/32§
97	14	1/4‡§
97	16	9/32§

EAGLE.

BL8	8	1/4
BL9	9	1/4
BL10	10	1/4
BL12	12	1/4
BL14	14	1/4
KC10	10	1/4
KC12	12	1/4
KC14	14	1/4
14X	14	1/4
16X	16	1/4

EMERSON.

BS14	14	1/4
BS14R	14	1/4
N12	12	1/4‡§
N14	14	1/4‡§
N16	16	1/4‡§
N12R	12x	1/4‡§
N14R	14x	1/4‡§
N16R	16x	1/4‡§
N14R2	14x	5/16
N12R9 QD	12x	5/16
N14R9 QD	14x	5/16
N16R9 QD	16x	5/16
P14-2 Brkr.	14	5/16†

FULLER & JOHNSON.

12R	12	5/16
14X	14	5/16
16X	16	5/16

GALE.

No.	Size, ins.	Thickness, ins.
A12	12	1/4
A14	14	1/4§
A16	16	1/4§
DS12	12	5/16†
DS14	14	5/16†
DS16	16	5/16†

GRAND DETOUR.

A25 Brkr.	14	5/16‡
BX	12x	1/4§
BX	14x	5/16†
BX	16x	9/32†§
14D QD	14	5/16

JANESVILLE (Reliance).

1	12x	9/32
2	14x	1/4‡§
2R	14x	1/4‡
3	16x	5/16‡
AR12	12	5/16‡
AR14	14	5/16
AS12	12x	9/32
AS14	14x	9/32
AS16	16x	9/32
CR14	14	5/16
16AR	16	5/16

KINGMAN.

A16	16	9/32
K23 Soft Ctr.	12x	9/32
K24 Cruc.	12	9/32
K25 Soft Ctr.	14x	9/32
K26 Cruc.	14	9/32
K27 Soft Ctr.	16x	9/32
K28 Cruc.	16	9/32
S00	10	9/32
S312	12	9/32†
S314	14	1/4
S316	16	9/32†
R	14	1/4
S	12	1/4
T	11	1/4

MOLINE.

AA9	9	1/4
AA10	10	1/4
BB9	9	1/4
BB10	10	1/4
BB11	11	1/4
BB12	12	1/4
BB14	14	1/4
C1 LH	14x	1/4§
C10	16	1/4
C12 LH	12x	1/4
CY12	12x	5/16
CY121 QD	12	5/16
CY14 LH	14x	5/16
CY16	16x	5/16
D1	14x	1/4§
D2	14	1/4§
D10	16x	1/4

MOLINE—Cont.

No.	Size, ins.	Thickness, ins.
D16	16x	1/4
D112	12	1/4
D114	14	1/4§
D116	16	1/4
DW12	12x	5/16
DW14	14x	5/16
DW16	16x	5/16
DW121 QD	12x	5/16
DW141 QD	14x	5/16
DW161 QD	16x	5/16
FALD11 Alf.	16	1/4
FC10	16	1/4
FD1	14	1/4§
FD11	16x	1/4§
FHW	16x	5/16
FSD1	12x	1/4§
H16	16	1/4
H116	16x	1/4§
SD1	12	1/4
T9	9	1/4
T10	10	1/4
T12	12	1/4
T14	14	1/4
T16	16	1/4
W12 Dbl. Shin.	12x	1/4§
W14 Dbl. Shin.	14x	1/4§
W16 Dbl. Shin.	16x	1/4§
WH16 Dbl. Shin.	16x	1/4§
Y12 Dbl. Shin.	12x	9/32†
Y14 Dbl. Shin.	14x	9/32†
Y16 Dbl. Shin.	16x	1/4
43 Brkr.	12	5/16†
44 Brkr.	14	5/16†
45 Brkr.	16	5/16†

MORRISON.

M12	12x	1/4‡
M14	14x	1/4
M16	16x	1/4‡

OLIVER.

C4	10	1/4
C7	12x	1/4§
C8	14x	1/4§
C8	16x	1/4§
C9	16x	1/4§
DS8	14x	1/4§
DS8	16x	1/4§
NC9	12	5/16
NC9	14	5/16
NC23	12x	5/16
NC23	14x	5/16
NC23	16x	5/16
NCC7 QD	12x	1/4§
NC Star 3	12x	1/4
NC7 QD	12x	5/16
NC8 QD	14x	5/16
NC9 QD	16	5/16
NC41 Horn (Ex. Wide)	12	5/16

OLIVER—Cont.

No.	Size, ins.	Thickness, ins.
NC161 Brkr.	14	5/16
ND1	12	1/4
ND2	14	1/4
Star 3	12x	1/4
Star 4	14x	5/16
Star 5	16x	5/16
33X	12	1/4
160 Brkr.	12	5/16
161 Brkr.	14	5/16
4674 QD	12	5/16
4675 QD. Fdsn.	14x	5/16

PERU.

BR	12x	9/32
BR	14x	9/32
BR	16x	9/32

RELIANCE (Janesville).

1	12	9/32
2	14	1/4‡§
3	16	5/16‡

ROCK ISLAND.

22	12	9/32
30	12x	1/4‡
32	14x	5/16‡
34	16x	5/16
38	14x	9/32†§
40	16x	5/16‡
66	12x	5/16
68	14x	5/16†
70	16x	5/16
A16	16x	5/16‡
TB8	8	1/4§
TB9	9	1/4§
TB10	10	1/4§
TB12	12	1/4§
TB14	14	1/4§
TS12	12	1/4‡
TS14	14	1/4‡§
TS16	16	5/16
X1-14	14x	5/16

SATTLEY.

ARB Brkr.	14	5/16
D112	12	1/4
D114C	14	1/4
F14E	14	5/16
FN12	12x	5/16
FN14	14x	5/16
FN16	16x	5/16
X12	12x	5/16†
X14	14x	5/16†
X16	16x	5/16†
X12N	12	5/16
69	16	1/4
74	14x	5/16†
79	14	9/32†
181	12	1/4§
182	14	1/4§
186N	16	1/4§

Factory Shipment Patterns—Fitted and Bolted Plow Shares

CRUCIBLE AND SOFT CENTER.

The patterns listed below are not carried in our regular stock, but can be furnished for shipment from factory. Items on which the demand warrants we will add to our stock from time to time. Guaranteed to fit the Plows for which they are intended, as listed.

AVERY.

No.	Size, ins.	Thickness, ins.
IBL	7	1/4
IBL	12	1/4
Pampa 1½	10	1/4
Pampa 2½	11	1/4
Paragon	16	1/4
Texas	16	9/32†
A24	14	5/16
A24-D1	14	5/16
D1 QD	14	5/16
6-OB	6	1/4
7OB (Oriole)	7	1/4
8OB (Oriole)	8	1/4

AVERY—Cont.

No.	Size, ins.	Thickness, ins.
9OB (Oriole)	9	1/4
10 OB (Oriole)	10	1/4
T & S 12	12	9/32
T & S 14	14	9/32

AVERY GRAND DETOUR.

A24-D1 QD.	14	5/16
A24.	14	5/16
D1 QD.	14	5/16

BRADLEY.

L21-20-147	14	9/32
R81	8	1/4

BRADLEY—Cont.

No.	Size, ins.	Thickness, ins.
R121	12	1/4
RB10	10	1/4
RB12	12	5/16†
RB14	14	5/16
Saxon 12	12	5/16
T27	12	5/16
T67	16	5/16
TK10	10	1/4
TK12	12	5/16
TK14	14	1/4
045	14	1/4§
047	14	5/16

BRADLEY—Cont.

No.	Size, ins.	Thickness, ins.
070	16	1/4§
19-147	14	5/16
19-147SX	14	5/16
19-167SX	16	5/16
20-127SX	12	5/16
20-147	14	5/16
20-167	16	5/16
20-167SX	16	5/16
75TX	7	1/4
75VX	7	1/4
85TX	8	1/4
85VX	8	1/4

Factory Shipment Patterns—Fitted and Bolted Plow Shares—Continued

BRADLEY—Cont.

No.	Size, ins.	Thickness, ins.
95TX	9	1/4
95V	9	1/4
95VX	9	1/4
105TX	10	1/4
105VX	10	1/4
115TX	11	1/4
115VX	11	1/4
125TX	12	1/4
125VX	12	1/4
145TX	14	1/4
145VX	14	1/4

CANTON (P. & O.)

44	13	1/4
50S	10	9/32
56	14	9/32
66R	14	1/4
110R	16	1/4
116	8	1/4
138	18	9/32§
218	16	1/4
226	14	9/32
228 Brkr.	14	1/4
242 Alf.	16	9/32
243 Alf. LH.	14	9/32
243A-LH Alf.	14	9/32§†
244 Alf.	14	9/32†
248	14	1/4
267LH	14	5/16‡
269LH	16	5/16
272	18	5/16
294 Brkr.	14	5/16†
296 Brkr.	16	1/4
300	13	5/16
310K Alf.	16	1/4
318	7	1/4
320	8	1/4
322	9	1/4
326 Brkr.	14	1/4
328 Brkr.	16	1/4§
336 Brkr.	16	5/16
340 Brkr. Short	14	3/8
342 Brkr. Short	14	3/8
348 Brkr.	14	5/16
350 Brkr.	16	5/16
354	8	1/4
394	16	5/16
404	10	5/16
406	9	1/4
428 QD.	14	5/16
450 QD.	10	5/16
463 LH OD.	14	5/16
464 Alf. OD.	14	5/16
464 Alf. OD.	16	5/16
465 LH Alf. OD.	14	5/16
465 LH Alf. QD.	16	5/16
467 LH QD.	16	5/16
468 Alf. QD.	16	5/16
469 LH Alf. QD.	16	5/16
476	14	9/32
476 OD.	14	5/16
486 QD.	16	5/16
6307H	14	5/16

CASADAY

CB6	7	1/4
CB7	8	1/4
CB8	9	1/4
CB9	10	1/4
CB10	11	1/4
X512LH	14	5/16
512 Horn (Ex. Wide)	12	5/16
514 Horn (Ex. Wide)	14	5/16
516 Horn (Ex. Wide)	16	5/16
525	12	5/16
525	14	5/16
525	16	5/16
617 Horn (Ex. Wide)	16	5/16

CASE

No.	Size, ins.	Thickness, ins.
ADL	13	9/32
ADL10	10	5/16
ADL13	13	9/32§
AN	12	1/4
AS	18	1/4‡§
EM Brkr.	12	5/16†
EM Brkr.	14	5/16†
EM Brkr.	16	5/16†
LMH Brkr.	14	5/16
G13	13	1/4
GM12	12	9/32
GM14	14	1/4§
GM16	16	5/16
12QADHL QD.	12	5/16
14QADHL QD.	14	5/16
14QSGHL QD.	14	5/16
16QADL QD.	16	5/16
SGHL12	12	5/16
SGHL14	14	5/16
SGHL16	16	5/16
SGL13	13	9/32
T8	8	1/4
T11	11	1/4
T16	16	1/4
TE16	16	1/4

DEERE

DBE Brkr.	12	5/16
DBG Brkr.	16	5/16†
M8	8	1/4
M9	9	1/4
M10	10	9/32
M11	11	9/32
M12	12	9/32
M14	14	9/32
NF	14	1/4
P7	7	1/4
P8	8	1/4
P9	9	1/4
P10	9	1/4
PE12 Brkr.	12	5/16†
PG16	16	1/4
P33H	14	5/16
R8	8	1/4
X8	8	1/4
X9	9	1/4
X12	12	5/16†
X38	10	1/4
X41LH	13	9/32
X42	14	9/32§
054A	16	1/4‡
22 Horn (Ex. Wide)	11	5/16
24	10	5/16
30	11	9/32
31H	12	5/16
38	10	1/4
41	13	1/4§
44	18	5/16
82 Alf.	14	1/4
84 Alf.	14	1/4
84 Alf.	16	1/4
86 Alf.	16	1/4
96	18	9/32
105	12	5/16
112 Alfalfa	14	1/4
112 Alfalfa L.H.	14	1/4
119	14	1/4
127	14	5/16
128 Alfalfa	16	1/4
132	12	1/4
142	12	1/4‡
163	18	5/16
164 Brkr.	12	5/16
164 Brkr.	13	5/16
165 Brkr.	14	5/16
166 Brkr.	16	5/16
179 Brkr.	14	3/8
181	14	5/16
184	16	5/16
186	10	5/16
186LH	10	5/16

DEERE—Cont.

No.	Size, ins.	Thickness, ins.
205 QD.	14	3/8
205 Brkr. QD.	14	3/8
217LH QD.	14	5/16
219 QD.	18	9/32
228 QD.	12	5/16
230	16	5/16
230 QD.	16	9/32
231 Brkr. QD.	12	5/16
232 Brkr. QD.	14	5/16
233 Brkr. QD.	16	5/16
241 QD.	12	5/16
242 QD.	16	5/16
243 QD.	14	5/16
248 Alf. QD.	14	1/4
248 Alfalfa L.H. QD.	14	1/4
251 QD.	9	1/4
251X QD.	9	1/4
256	10	1/4
256 QD.	10	1/4
257 QD.	12	1/4
258 Alf. QD.	16	1/4
266 RH QD.	14	5/16
266 LH QD.	14	5/16
276 QD.	7	1/4
277 QD.	8	1/4

DEFIANCE (La Crosse)

B14 Stbl. 3 holes	14	5/16
B12 Brkr.	12	1/4
B14 Brkr.	14	1/4
B16 Brkr.	16	9/32
LAX04	12	9/32
LAX04	14	9/32†
LAX04	16	9/32
LAX11	12	9/32†
LAX11	14	9/32
LAX11	16	9/32
LAX19 QD.	12	5/16
LAX19 QD.	14	5/16
1912 QD.	12	5/16
1914 QD.	14	5/16
1916 QD.	16	5/16
97	18	1/4
117	12	5/16

EAGLE

BL7	7	1/4
KC7	7	1/4
KC8	8	1/4
KC9	9	1/4
14SBX	14	1/4
16SBX	16	1/4
Gen. Pur.	14	1/4
Gen. Pur.	16	1/4

EMERSON

BS7	7	1/4
BS8	8	1/4
BS9	9	1/4
BS10	10	1/4
BS12	12	1/4
BS12R	12	1/4‡
BSR	12	9/32
BSR	14	9/32
GE14	14	5/16†
N10C	10	1/4
N10R9 QD.	10	5/16
N13	13	5/16
N13R	13	5/16
N13RC9 QD.	13	5/16
N14C	14	1/4‡§
N14RC	14	5/16
N12R2	12	5/16
N16R2 QD.	16	9/32§
N14R6 QD.	14	3/8
N12R8 QD.	12	3/8
N14R8 QD.	14	3/8
N14R8 QD.	14	7/16
N16R8 QD.	16	3/8
N16R8 QD.	16	7/16

EMERSON—Cont.

No.	Size, ins.	Thickness, ins.
N16R15 QD.	16	5/16
N13R9 QD.	13	5/16
N14R15 QD.	14	5/16
N12RC9 QD.	12	5/16
N14RC9 QD.	14	5/16
N16RC9 QD.	16	5/16
N18	18	5/16
N18R	18	5/16
P12-2	12	5/16†
P14 Brkr.	14	5/16
P16-2	16	1/4
P14-4 Brkr.	14	5/16
P16-4 Brkr.	16	5/16
P14-10 Brkr.	14	5/16
P16-10 Brkr.	16	5/16
PE2 Brkr.	16	5/16
RN	12	1/4§‡
RN	14	1/4§‡
RN	16	1/4§‡
RN	18	5/16
RN13	13	5/16
SE12	12	1/4
SE14	14	1/4

FULLER & JOHNSON

R	12	5/16
UR	12	5/16
UR	14	5/16
UR	16	5/16
12W	12	5/16
12X	12	5/16
18X	18	5/16
12XR	12	5/16
14XR	14	5/16
16XR	16	5/16
18XR	18	5/16
12XW	12	5/16
14XW	14	5/16
16XW	16	5/16
18XW	18	5/16

GALE

A8	8	1/4
A10	10	1/4
A13	13	1/4
C12	12	1/4
C13	13	1/4
DS13	13	1/4
X12	12	1/4
X13	13	1/4
X13LH	13	1/4
X14	14	1/4
X16	16	1/4
X13L	13	1/4
X14L	14	1/4
X13LDS	13	1/4
X14LDS	14	1/4
X13R	13	1/4
X14R	14	1/4
X13RDS	13	1/4
X14RDS	14	1/4
ZX14	14	9/32

GRAND DETOUR

A24	14	5/16
A24D QD.	14	5/16
B14	14	5/16
B26	12	5/16
D1	14	5/16
DX16	16	5/16
E14	14	9/32
S4	14	9/32
S5	14	9/32§
S7	16	9/32§
S11	16	9/32
S122	16	9/32
S151	14	9/32§
SBX	12	1/4
SBX	14	5/16†
SBX	16	9/32†
14B QD.	14	5/16

Factory Shipment Patterns—Fitted and Bolted Plow Shares—Continued

GRAND DETOUR—Cont.

No.	Size, ins.	Thickness, ins
4	14	9/32§
5	14	9/32§
7	16	9/32§
11	16	9/32
122	16	9/32
151	14	9/32§

INDEPENDENT HARV. CO.

GP2105	12	5/16
GP2120	14	5/16
GP2122	12	5/16
SP2118	16	5/16
SP2119	16	5/16
SP2128	14	5/16

JANESVILLE (Reliance).

CR12	12	5/16
3R	16	5/16
2W	14	1/4‡§
3W	16	5/16
16CR	16	5/16

KINGMAN

A	16	9/32
L	9	1/4
U	10	1/4
V	9	1/4
W	8	1/4
X	7	1/4
H314	14	5/16
OK23	12	9/32
OK24	12	9/32
OK25	14	9/32
OK26	14	9/32
OK27	16	9/32
OK28	16	9/32
S2	12	9/32
S4	14	9/32
S6	16	9/32
S01	11	9/32
S07	7	9/32
S08	8	9/32
S09	9	9/32

MOLINE

A7	7	1/4
A8	8	1/4
A9	9	1/4
A10	10	1/4
AA8	8	1/4
BB8	8	1/4
BB16	16	1/4
C3	13	1/4§
C12 RH	12	1/4
C13	13	1/4§
C13 LH	13	1/4
C18	18	5/16
CC14	14	5/16†
CY10	10	5/16
CY13	13	5/16
CY131 QD	13	5/16
CY141 QD	14	5/16
CY161 QD	16	5/16
CY14AL Alf.	14	1/4
CY14AL Alf. LH.	14	1/4
CY16AL Alf.	16	1/4
CY141AL Alf.	14	1/4
CY141AL Alf. LH.	14	1/4
CY161 QD.	16	5/16
D6	14	1/4§
D7	12	1/4
DD14	14	5/16
DW	13	5/16
DW	14	5/16
DW-AL	14	1/4
DW14AL Alf.	14	9/32†
DW16AL Alf.	16	9/32
DW18	18	5/16
DW131 QD.	13	5/16
FALD1 Alf.	14	1/4

MOLINE—Cont.

No.	Size, ins.	Thickness, ins
FC1	14	1/4‡
FC12	12	1/4
FD9	15	1/4
FD18	18	1/4§
FDH12	12	1/4
FDH16	16	1/4
FHW	14	5/16
FSC1	12	1/4
H12	12	1/4
H112	12	1/4
H114	14	1/4
J14	14	1/4
MF10	10	1/4
MF12	12	1/4
NB16	16	1/4
Q12	12	5/16
Q14	14	5/16
S7	7	1/4
SC1	12	1/4
T7	7	1/4
T8	8	1/4
T10X	10	1/4
T11	11	1/4
T14-16	16	1/4
W18 (Dbl Shin)	18	1/4
Y13 Dbl Shin)	13	1/4
Y14AL Alfalfa	14	9/32†
Y16AL Alfalfa	16	1/4
W-AL Alf.	14	9/32
4	8	1/4
6	14	1/4§
7	12	1/4
22	14	1/4§
41	14	3/8
112	12	1/4
114	14	1/4§
116	16	1/4

MORRISON

T & S Gen. P.	12	1/4‡
T & S Gen. P.	14	1/4
T & S Gen. P.	16	1/4‡

OLIVER

A	7	5/16†
B	8	5/16
C1	7	1/4
C2	8	1/4
C3	9	1/4
C5	11	1/4
C6	12	1/4
CA161 Brkr.	14	5/16
Crescent 9	16	1/4
DS7	12	1/4§
G1	10	1/4
G4	14	1/4
J2	12	1/4
J3	14	1/4
J02 Brkr.	12	1/4
J03 Brkr.	14	1/4
J04 Brkr.	16	1/4
J1	14	1/4
NC12	14	5/16
NC12	16	5/16
NC23 LH.	14	5/16
NC23AL Alf.	14	5/16
NC41 Horn Ex. Wide.	14	5/16
NC41 Horn. Ex. Wide.	16	5/16
NC50	14	5/16
NC50	16	5/16
NC160 Brkr.	12	5/16
NC162 Brkr.	16	5/16
NC173	12	5/16
NCCD	16	1/4
NCC8 QD.	14	1/4§
NCC9 QD.	16	1/4
NC Cres. 7H.	12	5/16
NC Cres. 8H.	14	5/16
NC Cres. 7DS.	12	5/16
NC)7 QD.	12	5/16
NC)8 QD	14	5/16

OLIVER—Cont.

No.	Size, ins.	Thickness, ins.
NC)9 QD.	16	5/16
NCB5DS.	10	3/8
NCB5	10	3/8
NC*4A-L.	14	5/16
NC*4AR Alf.	14	5/16
S9	12	3/8
S9	14	3/8
S9	16	3/8
Star LLH.	14	1/4
Star 3LH.	12	1/4
Star 4LH.	14	5/16
Star 5 Cres. 9.	16	1/4§
SOL4	18	5/16
)1B QD.	7	1/4
)2B QD.	8	1/4
)3B QD.	9	1/4
)4B QD.	10	1/4
W41 LH.	14	7/16
X03	14	1/4‡
03	14	5/16‡
03	15	5/16
03	16	5/16
7	12	1/4§
8	14	1/4§
8	16	1/4§
17	16	7/16
31	11	1/4
31X	10	1/4
33	12	1/4
34X	14	1/4
50	14	5/16
50	16	5/16
61	7	1/4
77	12	7/16
111	12	5/16
162 Brkr.	16	5/16
222	14	5/16
403	10	5/16
404 Horn Ex. Wide.	12	5/16
405 Horn Ex. Wide.	14	5/16
5312	12	3/8
5314	14	3/8
5316	16	3/8
5526 QD.	14	5/16
5872 QD.	16	5/16
5928 LH QD.	14	5/16
5934 QD.	14	7/16
5936	16	7/16
5943 Alf.	14	3/8
5944 Alf. LH.	14	3/8
5948 Alf.	14	5/16
5949 Alf. LH.	14	5/16

PERU

AL	12	9/32
AL	14	9/32§
AL	16	9/32†
BRX	12	9/32
BRX	14	1/4

RELIANCE

AR	12	9/32
AR	14	9/32
AR	16	9/32
AS	16	9/32
AS12	12	9/32
AS14	14	9/32
R1	12	9/32
R2	14	1/4†§
R3	16	9/32

ROCK ISLAND

C6	14	1/4
C7	12	1/4
C7½	11	1/4
C8	10	1/4
TB7	7	1/4§
TB16	16	1/4
TS10	10	1/4
TS11	11	5/16
TS13	13	1/4

ROCK ISLAND—Cont.

No.	Size, ins.	Thickness, ins.
X3	12	1/4‡
25	12	1/4
26	14	1/4
27	14	9/32
67LH	14	5/16
70H	16	5/16
74	8	1/4
143 Brkr.	14	1/4§
144 Brkr.	16	1/4
268	14	5/16

RUMLEY

B14 Brkr.	14	5/16
S14	14	5/16

SAMPSON.

D- QD.	14	9/32

SATTLEY

ARB14 Brkr.	14	3/8
D8	8	1/4
D9	9	1/4
D10	10	1/4
D114	14	1/4
F12	12	5/16
F12C	12	5/16
F13	13	5/16
F13C	13	5/16
F13N	13	5/16
F14	14	5/16
F14C	14	5/16
F14E	14	3/8
F16	16	5/16
F16C	16	5/16
FN	13	5/16
X13	13	5/16†
X13N	13	5/16
X14N	14	5/16
X16N	16	5/16
64	16	1/4
69N	16	1/4
69W	16	1/4
74N	14	5/16†
181N	12	1/4§
182N	14	1/4§
186	16	1/4

SOLID COMFORT

130	12	5/16
134	14	1/4
138	16	1/4‡

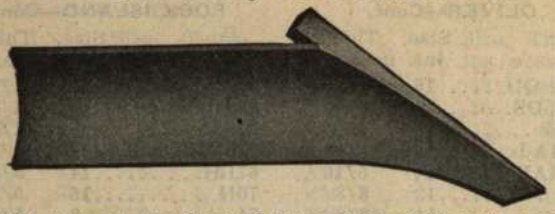
SYRACUSE

1322LH	14	5/16
1422	14	1/4
1431	16	5/16
1431X	16	5/16
1432	14	5/16†
1432X	14	5/16†
1432½	13	5/16
1432½X	13	5/16
1433	12	5/16
1433X	12	5/16
1433½	11	5/16
1434	10	5/16
1631	16	5/16
1631X	16	5/16
1632	14	5/16†
1632X	14	5/16†
1632½	13	5/16
1632½X	13	5/16
1633	12	5/16
1633X	12	5/16
1633½	11	5/16
1634	10	5/16

THOMPSON

C	14	5/16‡
D	16	5/16‡
H	12	9/32
J	14	5/16‡
K	16	5/16‡
14T	14	5/16‡
16T	16	5/16‡

Ever-Ready Plow Shares



Made to meet the demand for a fully welded plow share that can be quickly and easily fitted to the different makes of plows, thus saving the hard work of welding on the landside and finishing the point. It can be fitted to the angle of more plows than any other welded share on the market. The landside extends to the heel and is long enough to cut to fit any plow. Right hand only carried in stock; left hand from factory. Weight each, 10-in., 7 lbs.; 12-in., 9 lbs.; 14-in., 10 lbs.; 16-in., 12 lbs.

	Width of Steel	Thickness	Crucible	Soft Center
10-in.	5½-in.	¼-in.	Each, $3.20	.....
12-in.	6 -in.	¼-in.	Each, $3.80	$5.60
14-in.	6 -in.	¼-in.	Each, $4.20	$6.70
16-in.	6 -in.	¼-in.	Each, $4.70	$7.20

5/16-in. Shares furnished by shipping direct from factory.

Blank Plow Shares

Right and Left Hand.

Star Grade

	Width of Steel	Thickness	Solid Cast	Crucible	Soft Center
12-in.	5½ in.	¼ in.	Each, $2.90	$3.20	$3.10
14-in.	6 in.	¼ in.	Each, $3.10	$3.40	$5.60
14-in.	6 in.	5/16 in.	Each, $3.50	$3.90	$6.50
16-in.	6 in.	¼ in.	Each, $3.60	$4.00	$6.70
16-in.	6 in.	5/16 in.	Each, $4.40	$4.90	$8.00

Crescent Grade

	Width of Steel	Thickness	Solid Cast	Crucible
9-in.	5½ in.	¼ in.	Each, $2.20	.....
10-in.	5½ in.	¼ in.	Each, $2.40	.....
12-in.	5½ in.	¼ in.	Each, $2.90	$3.20
14-in.	6 in.	¼ in.	Each, $3.10	$3.40
16-in.	6 in.	¼ in.	Each, $3.60	$4.00

Blank Rod Breaker Lays

Kansas Pattern. Made of ¼-inch Open Hearth Steel, a tough quality that will hammer cold.

14-inch.....Each, $2.10
16-inch.....Each, $2.50

Extra Shares for Southern Plows

Fit either Steel or Wood Beam.

No. S—Pony, 7 inch.....Each, $1.00
No. AOS— 8 inch.....Each, $1.20
No. BOS— 9 inch.....Each, $1.50
No. COS—10-inch.....Each, $1.80
No. DOS—11-inch.....Each, $2.10

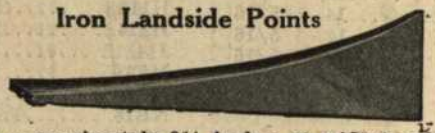
For complete Pony Plows, see page 487.

Blank Landside Plates

For Plow	Extreme Length, ins.	Extreme Width, ins.	Each Crucible	Each Soft Center
12-inch	21¼	5½	$1.70	$2.80
14-inch	23½	5½	$2.00	$3.40
16-inch	25	5½	$2.20	$3.60

We can also furnish various patterns and sizes of Fitted Landside Plates by shipping from factory.

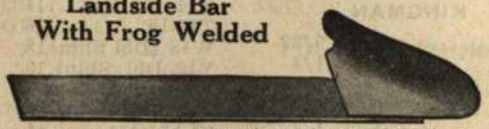
Iron Landside Points



Measures approximately 3¼ inches at widest point.
Right Hand Only.

Size.	Each.	Size.	Each.
½x12	$0.50	5/8x14	$0.70
½x14	$0.52	5/8x16	$0.74
½x16	$0.60		

Landside Bar With Frog Welded



Shaped, but otherwise rough and unfinished. Ready for fitting and drilling. Made of annealed steel. Can be fitted to any standard bottom. Right Hand Only.
Each.....$2.40

Plow Points

Nos. 1, 2, 01, 02.

Nos. F441, F442.

Drawn on edge, ready for welding. Crucible steel.

No.	Thickness, ins.	Width at widest part, ins.	Length, ins.	Each
1	¼	2½	9½	$0.20
2	¼	2¾	10½	$0.26
01	5/16	2½	9½	$0.28
02	5/16	2¾	10½	$0.30
F441	¼	3¼	8¾	$0.30
F442	¼	3¾	9¼	$0.36

Three Piece Universal Middle Burster Bottoms

Will Fit the Leading Middle Bursters.

Rear View

Weight each, 9-in., 18 lbs.; 10-in., 19 lbs; 12-in., 22 lbs.; 14-in., 25 lbs.; 16-in., 26 lbs.

9-inch.....Each, $7.70
10-inch.....Each, $7.90
12-inch.....Each, $8.30
14-inch.....Each, $8.80
16-inch.....Each, $9.70

Extra Points for Above.
9-inch.....Each, $3.50
10-inch.....Each, $3.50
12-inch.....Each, $3.50
14-inch.....Each, $3.60
16-inch.....Each, $4.10

Middle Burster Blades

With One ¾-inch Square Hole.

Made of ¼-inch steel

Size	Per lb.
10-inch Approximate weight, 11 lbs.	$0.30
12-inch Approximate weight, 13 lbs.	$0.30
14-inch Approximate weight, 14 lbs.	$0.30

Fitted and Bolted Lister and Middle Burster Shares

Will fit accurately the machines for which they are intended.

We can furnish shares to fit practically any Lister or Middle Burster in general use. The patterns listed below represent the items for which there has been most demand.

In some cases the same share of a certain make will fit both the Lister and Middle Burster. When uncertain as to the share wanted, therefore, it is well to take both lists into consideration, for if the number on the old Lister Share is the same as a number shown in our list of Middle Burster Shares, it is evident that the same share is used on both implements.

If unable to determine the number wanted, send the old share to us as a sample and we most likely can match it with some stock pattern.

Lister

Crucible and Soft Center.

Triangular or High Cut (Single Point)

Forked or Low Cut (Reinforced Point)

Triangular or High Cut

Avery (Sun Ray or Premier).
Black Hawk.
Brown (High Cut).
Buford.
Buster Brown.
Case (High Cut).
Chase.
Climax.
Defiance.
Eagle.
Fuller & Johnson.
Hapgood.
Kingman.
LaCrosse.
Morrison O. S. No. 4.
Morrison (Tongueless No. 5).
Peru (High Cut).
Rock Island.
Sattley No. L4N (Shop No. 28).
Sattley No. L13N (Shop No. L13).
Sattley Regular (Shop No. 23).
Swanson.
St. Joe.
Thompson.
Tricycle (Moline).

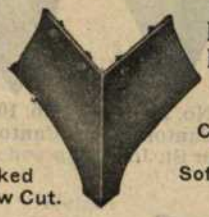
Forked or Low Cut

Bradley No. 6.
Bradley Regular.
Brown V.
Case Royal V (Holes 4 in. apart).
Case V (Holes 3 in. apart).
Canton (P. & O.) No. 6.
Canton No. 395, 10-inch.
Canton (P. & O.) No. 426.
Chase.
Deere No. 014.
Deere No. 54.
Deere No. 195.
Deere No. 287.
Emerson.
Gale.
Grand Detour.
Great Western.
Janesville.
Moline No. L230½.
Oliver No. 04L.
Oliver No. 016L.
Pekin V.
Peru V.
St. Joe.
Star.
Western Belle (Moline).

	Crucible	Soft Center
12-inch, any pattern	Each, $3.30	$6.90
14-inch, any pattern	Each, $3.40	$7.20
16-inch, any pattern	Each, $3.90	$7.50

The above prices apply only to ¼-inch thickness. For Shares ⅜ and ⅜-inch thick a slight extra will be added.

Middle Burster



Forked or Low Cut.

Crucible and Soft Center.

Triangular or High Cut.

14-inch Avery Sun Ray,
10-inch Avery No. 69,
12-inch Avery No. 95,
14-inch Avery No. 151,
16-inch Avery No. 266,
14-inch Avery Yel. Jkt.
16-inch Avery Yel. Jkt.,
10-inch Mr. Bill No. 110,
12-inch Mr. Bill No. 112,
14-inch Mr. Bill No. 114,
14-inch Bradley,
10-inch Canton No. 219,
10-inch Canton No. 395,
12-inch Canton No. 220,
14-inch Canton No. 221,
14-inch Canton No. 397,
16-inch Canton No. 222,
14-inch Canton No. 238,
16-inch Canton No. 240,
12-inch Case No. J12,
14-inch Case No. J14,
16-inch Case No. J16,
12-inch Case No. TM,
14-inch Case No. TM,
10-inch Deere, No. 51,
*12-inch Deere, No. 52,
*14-inch Deere No. 54,
14-inch Deere No. 75,
*14-inch Deere No. 195,
12-inch Deere No. 422,
14-inch Deere No. 285,
12-inch Eagle 1903.
14-inch Eagle 1903,
12-inch Emerson No. 892,
14-inch Emerson No. 894,
16-inch Emerson No. 896,
12-inch Emerson No. 9MB12,
14-inch Emerson No. 9MB14,
16-inch Emerson No. 9MB16,
12-inch Emerson No. 5MB12,
14-inch Emerson No. 5MB14,
16-inch Emerson No. 5MB16,
14-inch Janesville No. 14B,
16 inch Janesville No. 16B,
10-inch Kingman No. M10,
12-inch Kingman No. M12,
14-inch Kingman No. M14,
14-inch Moline No. L230½,
12-inch Moline No. 420,
14-inch Moline No. 421,
16-inch Moline No. 796,
14-inch Moline No. 832,
12-inch Moline No. 868,
12-inch Oliver No. 58,
14-inch Oliver No. 94,
12-inch Oliver No. PB12,
14-inch Oliver No. PB14,
16-inch Oliver No. PB16,
12-inch Rock Island No. MB12,
14-inch Rock Island No. MB14,
16-inch Rock Island No. MB16,
12-inch Rock Island No. BL12,
14-inch Rock Island No. BL14,
14-inch Sattley No. L17,

*Items marked * we can furnish in either Crucible or Soft Center grade. Others, Crucible only.

	Crucible	Soft Center
10-inch, any pattern	Each, $3.30	.....
12-inch, any pattern	Each, $3.30	$6.90
14-inch, any pattern	Each, $3.40	$7.20
16-inch, any pattern	Each, $3.90	.....

The above prices apply only to ¼ inch thickness. For shares ⅜ and ⅜ inch thick a slight extra will be added.

Fitted Low Cut Single Point Lister Shares

We can furnish 14-inch low cut V shape Lister Shares without reinforced point for the following listers: Deere, Moline, Canton and Emerson.

14-inch Crucible.....Each, $3.40

Blank Lister Shares

Crucible or Soft Center

Triangular or High Cut
Rock Island or Eagle Shape.
(Single Point)

Forked or V Low Cut.
Deere Shape.
(Reinforced Point)

We can furnish the same patterns of blanks as shown in the above list of fitted shares.

	Crucible	Soft Center
12-inch, any pattern	Each, $3.20	$6.80
14-inch, any pattern	Each, $3.30	$7.10
16-inch, any pattern	Each, $3.80	$7.40

Blank Middle Burster Shares

Crucible Steel Only.

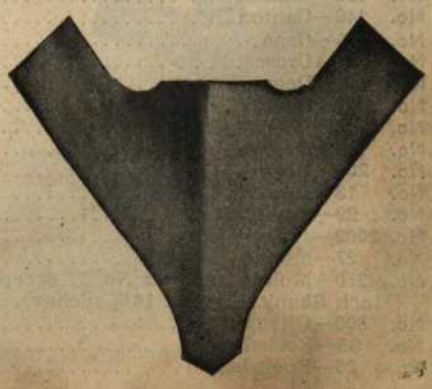
We can furnish the same patterns of blanks as shown in the above list of fitted shares.

10-inch.....Each, $3.20
12-inch.....Each, $3.20
14-inch.....Each, $3.30
16-inch.....Each, $3.80

Large Blank Lister Lays

Used principally for preparing wheat ground, on a regular Lister in place of the original Lister Lay and Mouldboard. Crucible grade only.

24-in. Each, $ 8.50
30-in. Each, $10.50



Subsoilers

Will fit accurately the machines for which they are intended

No. A1 Plain. With Wings.

No. A4. Blackhawk.

No. 15. Canton or St. Joe.

No. 100. Canton.

No. 10 Canton.

No. 14 Canton.

No. 01 Deere.

No. 140. Canton. No. 9. Case.

No. A3. Crescent.

No. 1. Deere.

No. S11 Deere.

No. 018 Deere.

No. 20 Deere.

No. 10—Canton, with ½x2-inch shank. Height 14⅞ inches . . . . . Each, $2.20
No. 14—Canton, with $\frac{7}{16}$x2-inch shank. Height 16¾ inches . . . . . Each, $1.70
No. S11—Deere Rider, with $\frac{7}{16}$x1½-inch shank. Height 14 inches . . . . . Each, $3.00
No. 018—Deere, with ½x1½-inch shank. Height 16 inches . . . . . Each, $1.50
No. 20—Deere, with ½x1½ inch shank. Height 12 inches . . . . . Each, $2.70
No. 01—Deere Walker, with ½x1¾-inch shank. Height 9½ inches . . . . . Each, $3.00

No. 2. Deere.

No. 3. Deere.

No. 4. Deere.

No. 180. Deere.

No. 200. Deere.

No. 13. Eagle.

No. 29. Emerson.

No. 2002. Janesville.

Nos. 27 and 270 Moline.

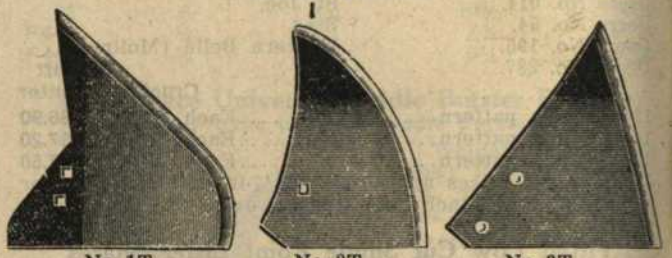
No. 300. Oliver.

No. S5. Rock Island.

No. 26. Rock Island.

No. A1—Plain with Wings . . . . . Each, $1.30
No. A4—Blackhawk . . . . . Each, $1.50
No. 15—Canton or St. Joe . . . . . Each, $1.80
No. 100—Canton . . . . . Each, $1.00
No. 140—Canton . . . . . Each, $0.80
No. 9—Case . . . . . Each, $1.40
No. A3—Crescent . . . . . Each, $1.20
No. 1—Deere . . . . . Each, $1.90
No. 2—Deere . . . . . Each, $1.90
No. 4—Deere . . . . . Each, $1.90
No. 180—Deere . . . . . Each, $0.80
No. 200—Deere . . . . . Each, $1.60
No. 13—Eagle . . . . . Each, $1.20
No. 29—Emerson . . . . . Each, $0.80
No. 2002—Janesville . . . . . Each, $1.90
No. 27—Moline . . . . . Each, $1.90
No. 270—Moline, same as No. 27 except with ½x1½-inch Shank. Height 10½ inches . . . . . Each, $3.00
No. 300—Oliver . . . . . Each, $1.50
No. S5—Rock Island . . . . . Each, $1.50
No. 26—Rock Island . . . . . Each, $1.50

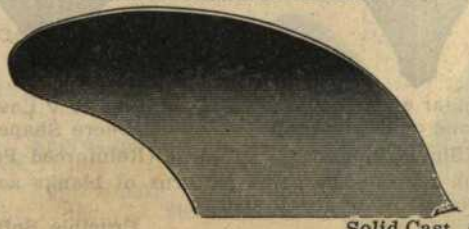
Root Cutters


No. 1T No. 2T No. 3T

Polished and Blued, ¼ Inch Thick

No.	To Fit	Each
1T	Deere No. 38 Listers	$0.70
2T	Canton Nos. 6 and 23 Listers	$0.60
3T	Moline Easy Money and Tri Belle Listers	$0.80
5T	Oliver Nos. 17 and 19 Listers	$0.70
8T	Emerson one and two-row Listers	$0.70
7T	Case Planters	$0.80
9T	Avery Planters	$0.80

Blank Mould Boards



	Solid Cast	Crucible
12-inch	Each, $5.90	$6.40
14-inch	Each, $6.50	$7.00
16-inch	Each, $7.40	$8.00

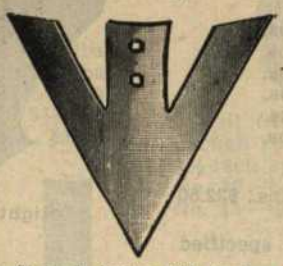
Sweeps

No. 73—3 Hole Joyce or Crabb

One ¾-inch square hole and two ⅜-inch holes, 2¼ inches apart. Polished and Blued.

Size.	Weight
6x 8 x¼	1½ lbs.
8x 8½x¼	2¼ lbs.
10x 9½x¼	2⅝ lbs.
12x10 x¼	3½ lbs.
14x10½x¼	4¼ lbs.
16x10½x¼	5¾ lbs.
6-inch	Per 100 lbs., $29.50
8-inch and larger	Per 100 lbs., $26.50

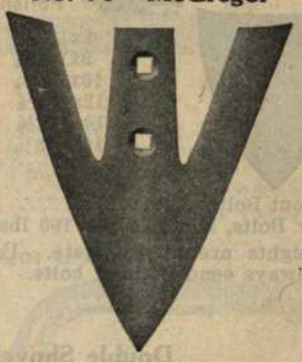
No. 72—2 Hole Joyce or Crabb



Two ⅜-inch holes 2¼ inches apart. Polished and Blued.

Size.	Weight
6x 8 x¼	1½ lbs.
8x 8½x¼	2¼ lbs.
10x 9½x¼	2⅝ lbs.
12x10 x¼	3½ lbs.
14x10½x¼	4¼ lbs.
16x10½x¼	5¾ lbs.
6-inch	Per 100 lbs., $29.00
8-inch and larger	Per 100 lbs., $26.00

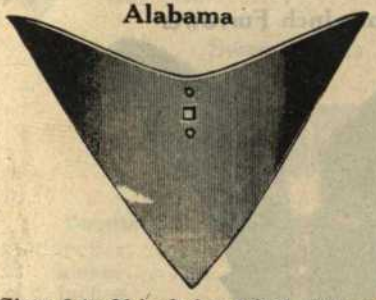
No. 70—McGregor



Two ⅜-inch holes 2¼ inches apart. Polished and Blued.

Size	Weight
6x 7½x¼	1¼ lbs.
8x 8½x¼	1¾ lbs.
10x10 x¼	2½ lbs.
12x11½x¼	3½ lbs.
14x13 x¼	5 lbs.
6-inch	Per 100 lbs., $32.60
8-inch and larger	Per 100 lbs., $29.60

Alabama



Sizes 8 to 20-inch furnished with one ¾-inch square hole in center and two ⅜-inch holes, 2¼ inches apart; larger sizes have only the one ¾-inch square hole. Polished and Blued.

No. 17—3-hole.

Size.	Weight.
8x 8x¼	2½ lbs.
10x 9x¼	3¼ lbs.
12x 9x¼	3¾ lbs.
14x 9x¼	4¼ lbs.
16x10x¼	6 lbs.
18x11x¼	7½ lbs.
20x11x¼	9¼ lbs.
Any size	Per 100 lbs., $19.20

No. 170—1-hole.

Size.	Weight.
24x12x¼	10½ lbs.
30x12x¼	13 lbs.
Any size	Per 100 lbs., $18.70

Magnolia

Sizes 8 to 20-inch furnished with one ¾-inch square hole in center and two ⅜-inch holes 2¼ inches apart; larger sizes have only the one ¾-inch square hole. Polished and Blued.

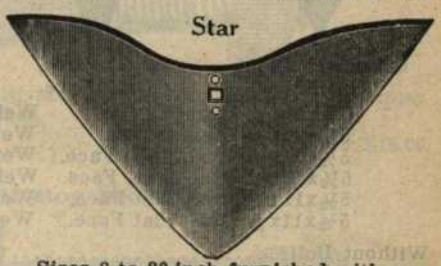
No. 37—3-hole.

Size.	Weight.
8x 8x¼	2½ lbs.
10x 9x¼	3¼ lbs.
12x 9x¼	3¾ lbs.
14x 9x¼	4¼ lbs.
16x10x¼	6 lbs.
18x11x¼	7½ lbs.
20x11x¼	9¼ lbs.
Any size	Per 100 lbs., $19.20

No. 371—1-hole.

Size	Weight.
24x12x¼	10½ lbs.
30x12x¼	13 lbs.
Any size	Per 100 lbs., $18.70

Star



Sizes 8 to 20-inch furnished with one ¾-inch square hole in center and two ⅜-inch holes 2¼ inches apart; larger sizes have only the one ¾-inch square hole. Polished and Blued.

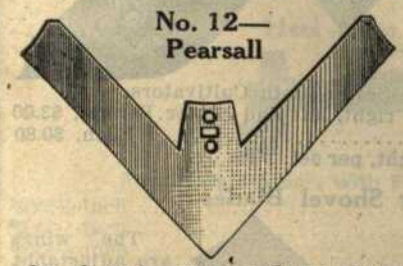
No. 43—3-hole.

Size.	Weight.
8x 8x¼	2½ lbs.
10x 9x¼	3¼ lbs.
12x 9x¼	3¾ lbs.
14x 9x¼	4¼ lbs.
16x10x¼	6 lbs.
18x11x¼	7½ lbs.
20x11x¼	9¼ lbs.
Any size	Per 100 lbs., $19.20

No. 431—1-hole.

Size.	Weight.
24x12x¼	10½ lbs.
30x12x¼	13 lbs.
Any size	Per 100 lbs., $18.70

No. 12—Pearsall



One ¾-inch square and two ⅜-inch round holes 2¼ inches apart. Polished and Blued.

Size.	Weight.
18x9x¼	6 lbs.
20x9x¼	7 lbs.
24x9x¼	7¼ lbs.
28x9x¼	8½ lbs.
30x9x¼	10⅛ lbs.
Any size	Per 100 lbs., $30.50

No. 26—Texas Heel

With one ¾-inch square hole. Polished and Blued.

10x3x¼	1⅞ lbs.
12x3x¼	2¼ lbs.
14x3x¼	3 lbs.
16x3x¼	3¼ lbs.
18x3x¼	3⅞ lbs.
20x3x¼	4¼ lbs.
24x3x¼	5¼ lbs.
30x3x¼	7 lbs.
Any size	Per 100 lbs., $18.60

No. 7—Thistle

For Five and Seven-Tooth Cultivators. A Bolt is included with each Sweep. All Polished and Blued.

Size	Weight	Each
8x⅛	1⅛ lbs.	$0.76
10x⅛	1⅝ lbs.	$0.80
12x⅛	1¾ lbs.	$0.92
15x⅛	2 lbs.	$1.16

All Sweeps 12-inch and smaller, 10 in bundle; 14-inch and larger, 5 in bundle.

Single Shovel Blades

Oval Pattern, Holes 2¼ Inches Center to Center.

Polished and Blued

8x12x¼	Weight	4¾ lbs.
9x12x¼	Weight	5 lbs.
10x12x¼	Weight	6¼ lbs.
12x13x¼	Weight	7 lbs.
14x15x¼	Weight	10 lbs.
16x16x¼	Weight	13 lbs.

Without Bolts.....Per 100 lbs., $22.50
For Bolts, add 1.75 per 100 lbs. net.
Weights are approximate. Unless otherwise specified we always send without bolts.

Double Shovel Blades

Holes 2¼ Inches Center to Center.
Polished and Blued.

Diamond Point, Flat Face. Oval Point, Oval Face. Oval Point, Flat Face.

5½x11x¼	Diamond.	Weight 3½ lbs.
5½x11x5/16	Diamond.	Weight 4½ lbs.
5½x11x¼	Oval, Oval Face.	Weight 3¼ lbs.
5½x11x5/16	Oval, Oval Face.	Weight 4 lbs.
5½x11x¼	Oval, Flat Face.	Weight 3¼ lbs.
5½x11x5/16	Oval, Flat Face.	Weight 4 lbs.

Without Bolts.....Per 100 lbs., $22.50
For Bolts, add 1.75 per 100 lbs. net.
Weights are approximate. Unless otherwise specified we always send without bolts.

Cotton Scraper Blades

Polished and Blued.

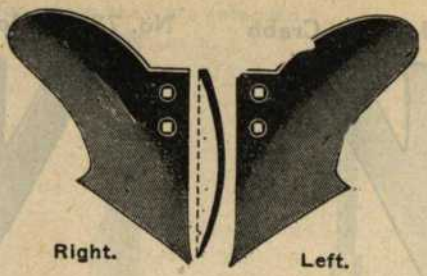
Bolts and Washers, Fin Point, with Adjustable Back.
5½x12x⅛, right and left. Wt. per pair 8 lbs. Per pair, $3.20
6½x12x⅛, right and left. Wt. per pair 9 lbs. Per pair, $3.60
7½x12x5/16, right and left. Wt. per pair 13 lbs. Per pair, $4.00
9 x12x5/16, right and left. Wt. per pair 17 lbs. Per pair, $4.80
Positively no pairs broken.

Bar Shares, Hillers or Mouldboards

Polished and Blued.

For Slotted Shank Only.
8¾ inches wide at point, 15½ inches extreme length. 5/16 inch thick. No pairs broken. Approximate weight per pair, 14 lbs.
For slotted shank, right and left.....Per pair, $4.20

Scooter Blades



Right. Left.

Holes 2¼ ins. apart. Point 7 ins. wide. Extreme length 15½ ins., ¼ in. thick. Polished and blued. Approximate weight per pair, 10 lbs. No pairs broken.

Per 100 lbs. $23.00

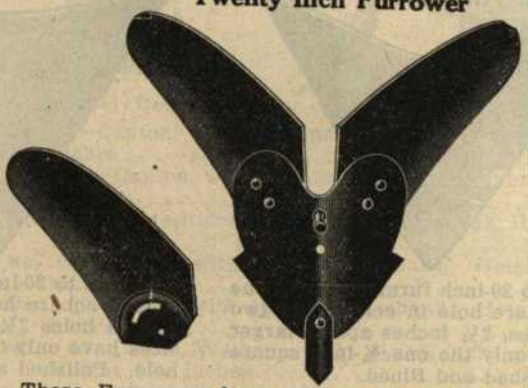
Turning Shovels

With One ¾-inch Square Hole.
Right hand only.
Polished and Blued.

Size	Approximate Weight
5x10x5/16	6 lbs.
6x11x5/16	7 lbs.
7x11x5/16	8 lbs.

Any size.....Per 100 lbs., $21.50

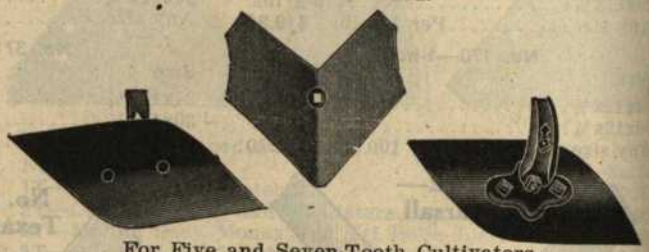
Twenty Inch Furrower



These Furrowers have adjustable wings which can be set to open a wide or narrow furrow or may be removed entirely for lighter work. They are for use on cultivators. Attached by two bolts 1½ ins. apart. Polished and Blued.
Furrower complete, weight 11 lbs.....Each, $4.80
Extra Points.....Each, $0.50

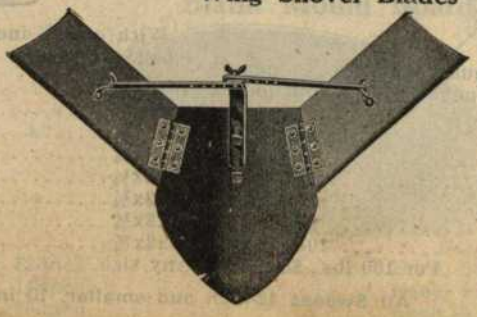
Horse Hoe Attachments

Polished and Blued.



For Five and Seven-Tooth Cultivators.
Complete set, one each right, left and center. Per set, $3.00
Extra Center Hoes.....Each, $0.80
Weight, per set, 7 lbs.

Wing Shovel Blades



The wings are adjustable, as shown in cut. The straps or braces that support them are punched to allow the blades to be set at any desired angle.

For price, see page 487.

Corn Shovels

Oval Face, Round Point.
With One ¾-inch Square Hole.

Size
6x 9x¼.....Weight 2¾ lbs.
7x10x¼.....Weight 3¼ lbs.
8x10x¼.....Weight 3¾ lbs.
10x11x¼.....Weight 5½ lbs.
Any size.....Per 100 lbs., $23.60

Southern Bull Tongues

Oval Face.
With One ¾-inch Square Hole.

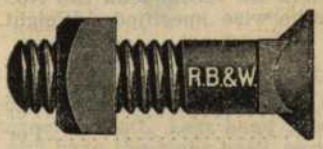
Size
2½x9x⅜.....Weight 1¾ lbs.
3 x9x⅜.....Weight 2¼ lbs.
Any size.....Per 100 lbs., $21.00

Southern Calf Tongues

Oval Face.
With Two Holes 2¼ Inches Center to Center.

Size
2½x11x¼.....Weight 1¾ lbs.
3 x11x¼.....Weight 2 lbs.
Any size.....Per 100 lbs., $22.50

Sweep Bolts



Countersunk Head, Short Square Shoulder.

⅜x1¾ inches.....Per 100, $2.95
⅜x2 inches.....Per 100, $3.10
⅜x2¼ inches.....Per 100, $3.20
⅜x2½ inches.....Per 100, $3.40
⅜x2¾ inches.....Per 100, $3.50
⅜x3 inches.....Per 100, $3.60
⅞x2½ inches.....Per 100, $4.50

Put up in packages of 50; no packages broken.

Heel Bolts

For Georgia Stock, with Round Tail Nut.

⅝x2½-inch.....Per 100, $21.00
⅝x3½-inch.....Per 100, $23.00
⅝x4½-inch.....Per 100, $25.00

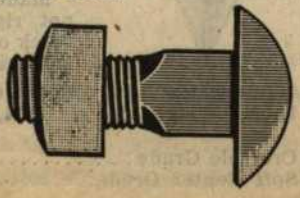
Heel Bolts

For Georgia Stock, with Flat Tail Nut.

⅝x2½-inch.....Per 100, $27.60
⅝x3· -inch.....Per 100, $29.00
⅝x3½-inch.....Per 100, $30.50
⅝x4½-inch.....Per 100, $33.80

Cultivator Friction Bolts

Will fit practically all makes of cultivators. Square shoulder.



Per 100
No. 31—½x1½...$12.00

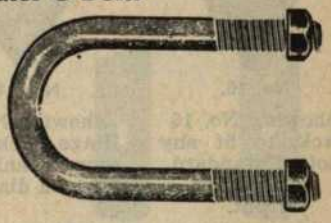
Cultivator Eye Bolts

Will fit many different cultivators. Is threaded long enough so can be cut off to fit many others. No. 30 has 1½-inch eye, No. 33 has 1⅜-inch eye.

No. 30—⅝x6. . .....Per 100, $60.00
No. 33—⅝x3. . .....Per 100, $44.00

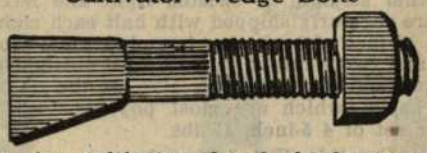
Cultivator U Bolts

Will fit the principal makes of cultivators. Length of U 5½ ins. Thickness of bolt ½ in.



No. 53—½x5½ ins. . ..Per 100, $30.00

Cultivator Wedge Bolts



For fastening cultivator shovel shanks to cultivators, Deere and other makes.

½x3¼ inches.....Per 100, $15.00

Cultivator Shovel Bolts

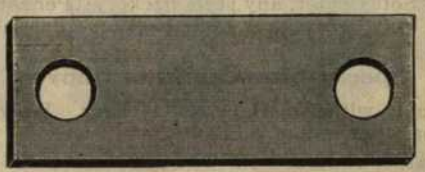
T Head, ⅞x2½ in.....Each, $0.17
T Head, ⅞x3 in.....Each, $0.17
Square Head, ⅞x2½ in.....Each, $0.06
Square Head, ⅞x3 in.....Each, $0.06

Cultivator Shovel Bolt Washers

Malleable.

⅞-inch . . . . . .Each, $0.10

Sweep Washers



This is a flat piece of steel, 3¼ inches long and 1¼ inches wide, has two holes 2¼ inches apart, and can be used in place of a shovel back in fastening any two or three-hole sweep to a slotted shank cultivator.

No. 2.....Per 100, $10.00

T Washers for Georgia Stocks

T Washers.....Per 100, $11.00

Fitted Cultivator Shovels

Crucible or Soft Center Steel, with Backs, Bolts and Washers. 3½ and 5-inch, Straight, also Right and Left Twist. Polished and Blued finish. Orders should state number of sets of Shovels wanted, how many in a set, width of Shovels, style of back, and whether crucible or soft center grade.

No. 16.

Showing No. 16 Back, to fit any slotted standard, with convex front.

No. 11.

Showing No. 11 Hinge Back, to fit round shanks 1 to 1¼-inch diameter.

No. 12

Showing No. 12 Back, to fit round shanks 1 to 1⅛-inch diameter.

No. 18.

Showing No. 18 Back, to fit round shanks 1¼-inch diameter.

No. 8.

Showing No. 8 Back, to fit any slotted shank with concave front.

Wood Beam.

Showing Wood Beam Back, to fit any wood standard.

It is important in ordering to specify style of back, width of steel, whether Crucible or Soft Center, and be sure to state whether straight or twisted right and left are wanted. 3½-inch shovels are intended for 6-shovel cultivators, and sets of 6 are regularly shipped with half each right and left twist shovels. Straight shovels can also be furnished when so requested. 5-inch shovels are intended for 4-shovel cultivators, and sets of 4 are regularly shipped with one each right and left twist and two straight shovels. All straight or all twist shovels can be furnished when so requested. In case of uncertainty regarding style of back, give us the name of cultivator. For stock orders we recommend the No. 11 and No. 16 styles of backs, which are most popular. We send Crucible grade unless otherwise specified. Weight per set of 6 3½-inch or set of 4 5-inch, 15 lbs.

3½x 8½x¼ Crucible, Fitted Shovels. . . . . Per set of 6, $5.00
3½x 8½x¼ Soft Center, Fitted Shovels. . . . . Per set of 6, $7.20
5 x10½x¼ Crucible, Fitted Shovels. . . . . Per set of 4, $4.40
5 x10½x¼ Soft Center, Fitted Shovels. . . . . Per set of 4, $7.20

Two-Row Listed Corn Cultivator Shovels

Also Called Eagle Claw Shovels

No. 16.
Showing No. 16 Back, to fit slotted shanks with convex front.

No. 11.
Showing No. 11 Back, with hinge, to fit round shanks 1 to 1¼-inch diam.

No. 12.
Showing No. 12 Back, to fit round shanks 1 to 1⅛-inch diameter.

In ordering be sure to give size, grade of steel and style of back. Crucible grade shipped unless otherwise specified. Weight per set of 4, 7 lbs.; per set of 8, 14 lbs.

3x7½x¼, Crucible, any style back. . . . . Per set of 8, $6.70
3x7½x¼, Crucible, any style back. . . . . Per set of 4, $3.40
3x7½x¼, Soft Center, any style back. . . . . Per set of 8, $9.20
3x7½x¼, Soft Center, any style back. . . . . Per set of 4, $4.60

Special Size Cultivator Shovels

Fitted only with No. 11 or No. 16 back. Weight per set of 4, 6 lbs.; per set of 8, 12 lbs.

2½x7½x¼-inch, Crucible, either back. . . . . Set of 8, $6.70
2½x7½x¼-inch, Crucible, either back. . . . . Set of 4, $3.40

Fitted Cultivator Bull Tongues

With Backs, Bolts and Washers.

We can furnish these Bull Tongues fitted with practically any style of back in regular use. In specifying style of back wanted refer to next page showing our numbers on various backs. Made only of crucible steel.

In ordering be sure to give style of back wanted. Weight per pair, 5 lbs.

2½x10x⅜, any style back . . . . . Per pair, $2.10

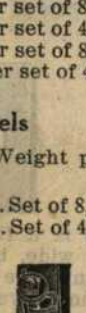


Illustration showing No. 16 Back

Fitted Potato Cultivator Shovels

With Backs, Bolts and Washers.

Crucible Steel.

Furnished with either No. 12 or No. 16 Back. These shovels are made only in right and left twist; no straight shovels. Crucible grade.

In ordering be sure to give style of back wanted. Weight per set of 4, 23 lbs.

4x14x⅜. . . . . Per set of 4, $7.60

Showing Right Hand Twist.

Showing Left Hand Twist.

Fitted Potato Bull Tongues

With Backs, Bolts and Washers.

These are extra long and are designed especially for cultivating potatoes. Furnished only with No. 16 back for slotted shanks. Made only of crucible steel. Weight per pair, 8 lbs.

2½x14x⅜. . . . . Per pair, $2.70

Clean Sweep Cultivator Shovels

This Cultivator Shovel has a pronounced curve suitable for best surface operation, has wide sweep with short earth friction before earth disposal. Furnished ¼-inch steel, has extra strength at neck which holds the back. Extreme width, 5½ inches; extreme length, 8½ inches.

Made only in straight shovels and not right or left twist. Carried in stock only with No. 11 or No. 16 shovel back, as shown on page 671.

In ordering give number to set, grade of steel and No. of back. Weight per set of 4, 10 lbs.; per set of 6, 15 lbs.

	Set of 4	Set of 6
Crucible Grade	$5.50	$ 8.20
Soft Center Grade	$8.00	$12.00

Fitted Spring Tooth Cultivator Shovels

Showing 2½x7x¼ single point with No. S flat back and bolt.

Showing 2½x7x¼ single point with No. 993 back, same as No. 12 style.

2½x7x¼, Single Point Crucible Steel.....Each, $0.64

Blank Cultivator Shovels

Twisted. Right Hand.

Straight.

Twisted. Left Hand.

Right hand shovels throw the soil to the right and have the left hand corner cut off. Left hand shovels throw the soil to the left and have the right hand corner cut off.

3½-inch shovels are intended for 6-shovel cultivators, and sets of 6 are regularly shipped with half each right and left twist shovels. Straight shovels can also be furnished when so requested.

5-inch shovels are intended for 4-shovel cultivators, and sets of 4 are regularly shipped with one each right and left twist and two straight shovels. All straight or all twist shovels can be furnished when so requested.

On orders where grade is not specified we send crucible.

3½x 8½x¼-inch Crucible. . . . . Per set of 6, $3.20
3½x 8½x¼-inch Soft Center. . . . . Per set of 6, $6.20
5 x10½x¼-inch Crucible. . . . . Per set of 4, $3.30
5 x10½x¼-inch Soft Center. . . . . Per set of 4, $6.40

Blank Eagle Claws

3x7½x¼ Crucible. Per set of 8, $3.30
3x7½x¼ Soft Center. . . . . Per set of 8, $5.60

Unless specified we send Crucible grade.

Blank Spring Tooth Shovels

Crucible Steel.
2½x7x¼, Single Point. Each. . .$0.36

Blank Bull Tongues

Crucible Steel.

Furnished only in Crucible Steel.

2½x10x$\frac{5}{16}$
Pr., $1.20

Cultivator Shovel Points

Nos	No. 0.	No. 1.	No. 2.	No. 3.
	0	1	2	3
Width at top, in.	3	3⅝	4	4½
Crucible..Each,	$0.14	$0.16	$0.22	$0.24
Soft Center Steel...Each,	$0.28	$0.32	$0.42	$0.46

Unless specified we send Crucible grade.

Cultivator Shovel Backs

For use on Cultivator Shovels, Eagle Claws, Bull Tongues, Cotton Scrapers, Bar Shares, etc.

No. 16 Right.

No. 16 Left.

No. 11.

No. 12.

No. 15.

No. 8.

W. B. Right.

W. B. Left.

No. 574 Left.

No. 574 Right.

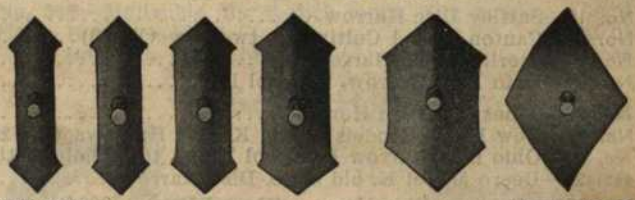
No. S.

No. 16—For Convex Slotted Shank. . . . . Each, $0.40
No. 11—For Round Shank, 1 to 1¼-in. . . . . Each, $0.40
No. 12—For Round Shank, 1 to 1⅜-in. . . . . Each, $0.40
No. 15—For Round Shank, 1 to 1¼-in. holes 2¼ inches center to center. . . . . Each, $0.40
No. 8—For Concave Shank. . . . . Each, $0.40
No. W.B.—For Wood Shank. . . . . Each, $0.40
No. 574—For Adj. Cotton Scrapers. . . . . Each, $1.00
No. S—For Flat Back, Spring Tooth. . . . . Each, $0.40
No. 898-9—Same as No. 11, except smaller, for Eagle Claw Shovels. . . . . Each, $0.40
No. 878—Same as No. 16, except smaller for Eagle Claw Shovels. . . . . Each, $0.40
No. 993—Same as No. 12, except for ¾-in. Shank for Spring Tooth Shovels. . . . Each, $0.40

For Cultivator Shovel Bolts and Washers, see Page 669.

Five-Tooth Cultivator Shovels

Oval Face, With Bolt.



*1¼x8x¼. . . . . Each, $0.30
1¼x8x$\frac{3}{16}$. . . . . Each, $0.28
1½x8x$\frac{3}{16}$. . . . . Each, $0.32
1¾x8x$\frac{3}{16}$. . . . . Each, $0.32
2 x8x$\frac{3}{16}$. . . . . Each, $0.36
2½x8x$\frac{5}{32}$. . . . . Each, $0.38
3 x8x$\frac{5}{32}$. . . . . Each, $0.38
4 x8x$\frac{5}{32}$. . . . . Each, $0.46
Diamond, 5x7½x$\frac{5}{16}$. . . . . Each, $0.56

*Especially designed for Planet Jr. Tools.
Width measurements are taken at narrowest part.

Beet Steels

These steels are the same as the Five-tooth Cultivator Shovels listed above.

1¼x8x¼. . . . . Each, $0.30
1¼x8x$\frac{5}{16}$. . . . . Each, $0.28
1½x8x$\frac{3}{16}$. . . . . Each, $0.32

Wooden Boxes for Disc Harrows and Cultivators

No. 2

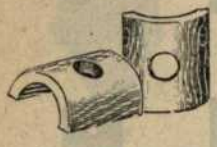
No. 3

No. 4

No. 5

No. 6

No. 7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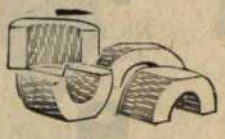
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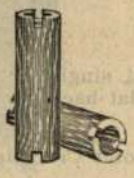
No. 10

No. 11


No. 12

No. 13

No. 14

No. 15

No. 16

No. 17

No. 18

No. 19

These Boxes are made of Hard Maple and we guarantee them to fit and wear as well as the originals.

If the Box wanted is not listed below, send us a sample and we may be able to match it with a Box under some other name. We are also putting in new patterns from time to time and may have just what you want.

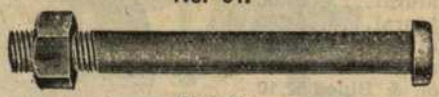
Be sure to give us number of box or name of implement **it is to be used on,** and how many pieces are wanted.

Will Fit	No. of pieces to make one box	No. of pieces to a compl. implement	Per piece
No. 2—Deere Model B, old style, Disc Harrow (KW61-KW62)	2	12	$0.12
No. 3—Deere, Model B, new style, Disc Harrow (KW238)	2	12	$0.12
No. 4—Keystone Disc Harrow (J9204)	2	12	$0.12
No. 5—Grand Detour Disc Harrow, top 1 hole, bottom no hole	2	12	$0.16
No. 6—Moline Disc Harrow (B739)	4	24	$0.07
No. 7—Canton Disc Harrow, top right or left (W212), bottom no hole (W211)	2	12	$0.14
No. 8—Emerson Disc Harrow, top 3 holes, bottom 1 hole (H51W)	2	12	$0.14
No. 9—Kingman Disc Harrow	4	24	$0.07
No. 10—Rock Island Disc Harrow	2	12	$0.12
No. 11—King Sled Cultivator, one row	4	16	$0.07
No. 12—Deere-King Listed Cultivator, one and two row (W1299)	1	4	$0.16
No. 13—Canton Sled Cultivator, one row (W285)	1	2	$0.14
No. 14—Swede Listed Cultivator	1	4	$0.14
No. 15—Moline Listed Cultivator	1	4	$0.12
No. 16—Emerson Listed Cultivator, two row (C75W)	2	8	$0.12
No. 17—Keystone Disc Harrow new style, octagon shape (J9598)	2	12	$0.12
No. 18—Sattley Disc Harrow	2	12	$0.12
No. 19—Canton Listed Cultivator, two row (W343)	1	4	$0.24
No. 20—Sterling Disc Harrow	2	12	$0.12
No. 21—Ohio Disc Harrow, in spool D522	4	24	$0.07
No. 22—Janesville Disc Harrow	2	12	$0.16
No. 23—New Deere, Models B and K Disc Harrows (KW238)	2	12	$0.12
No. 24—Ohio Disc Harrow (in spool D133), top 1 hole, bottom no hole	2	12	$0.12
No. 25—Deere Model K, old style, Disc Harrow	2	12	$0.14
No. 26R—Osborne Disc Harrow (Round Box) (J9204)	2	12	$0.14
No. 26S—Osborne Disc Harrow (Octagon Box) (J9598)	2	12	$0.12
No. 27—Peru Disc Harrow	2	12	$0.14
No. 28—St. Joe Disc Cultivator	1	4	$0.14
No. 29—Rock Island 2-row Disc Cultivator (WH13)	1	4	$0.14
No. 30—Janesville 2-row Lister Cultivator	1	4	$0.14
No. 31—Deere 2-row Disc Cultivator, late style (in casting K388) (W1401)	1	4	$0.24
No. 32—Moline Disc Cultivator (Captain Kidd), top 1 hole (K666) bottom no hole (K667)	2	8	$0.12
No. 33—Oliver Disc Harrow, top 2 holes, bottom no hole (TW2)	2	12	$0.12
No. 34—Avery Lister Cultivator (FW13)	1	4	$0.24
No. 35—Avery Disc Harrow (HW47)	2	12	$0.14
No. 38—Oliver Listed Cultivator (5448)	1	4	$0.12
No. 39—Moline No. 4S single and double row Listed Cultivator in hub LC689	1		$0.12
No. 40—I. H. C. New Style Disc Harrow (J9915)	2	12	$0.16

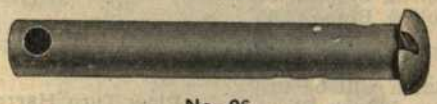
The above list shows the number of pieces required for each complete box. We will furnish broken sets or any quantity wanted on any of the boxes listed above.

Disc Pins

No. 01.



No. 03.



No. 06

Universal.

No.	Wt. each	Size, ins.	Head, ins.	Size hole, ins.	Each
01	1½ lbs.	⅞x8	⅜x1 7/16	¼	$0.36
02	1⅜ lbs.	⅞x8	⅜x1 7/16	none	$0.40
02A	1⅜ lbs.	⅞x8	⅜x1 7/16	¼	$0.42
03	1¾ lbs.	⅞x8	⅜x1 7/16	¼	$0.46

Nos. 02, 02A and 03 are threaded, but nut is included only with No. 03. Each pin has ¼-inch cotter pin hole, 7⅜ inches under head to center of hole, except the No. 02 pattern, which has no hole. Used on several makes of Discs.

Swede.

This pin measures ⅞x8 ins., with head ⅜x1⅝ ins. 7/16-in. cotter pin hole, 6 ins. under head to center of hole. Fits Swede Disc.

No. 04—Weight each, 1½ lbs. ..... Each, $0.40

Moline.

No. 06 pin measures ⅞x7½ ins., with notched head 1⅜ ins. in diameter. ¼-in. cotter pin hole 7¼ ins. under head to center of hole. Fits Moline Disc Cultivator.

No. 010 pin measures 1x8 ins. It has no head, but has two ¼-in. holes ½ in. from each end or 7 ins. from center to center of holes. Fits No. 4S Moline Disc Cultivator.

No. 06—Weight each, 1⅜ lbs. ..... Each, $0.38
No. 010—Weight each, 1¾ lbs. ..... Each, $0.36

Deere.

This pin measures ⅞x9 ins., with head ½x1 7/16 ins. 13/32-in. cotter pin hole, 7⅜ ins. under head to center of hole. Fits New Style Deere Listed Cultivator.

No. 08—Weight each, 1⅝ lbs. ..... Each, $0.44

Oliver.

This pin measures ⅞x9¼ ins., with head ⅜x1⅝ ins. 7/16-in. cotter pin hole, 8⅞ ins. under head to center of hole. Fits Oliver Listed Cultivator.

No. 09—Weight each, 1¾ lbs. ..... Each, $0.40

Emerson.

This pin measures ⅞x8 ins., with head ⅜x1⅜ ins. ⅜-in. hole, 7 ins. under head to center of hole. Fits Emerson Cultivator.

No. 011—Weight each, 1¾ lbs. ..... Each, $0.40

Ohio.

This pin measures ⅞x8½ ins., with head 9/16x1 7/16 ins. It has no hole. Fits Ohio Cultivator.

No. 012—Weight each, 1½ lbs. ..... Each, $0.40

Wheel Pins

Moline.

This pin measures 1x7½ ins., with notched head 1½ in. diameter. It has no hole. Fits Moline Disc Cultivator.

No. 07—Weight each, 1¾ lbs. ..... Each, $0.50

Harrow Eye Bolts

Consists of 7/16x4½-inch eye bolt and a 7/16x3-inch link. Weight per dozen, 8 lbs.

No. 913—Link Eye Bolts ..... Each, $0.26

The double pattern consists of two eye bolts 7/16x4¼, the popular size of double bolts for harrow repairs. Weight per dozen, 7 lbs.

No. 813—Double Eye Bolts ..... Each, $0.28

Harrow Teeth

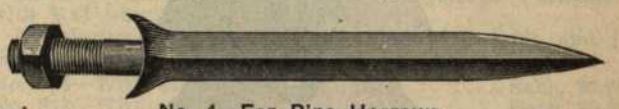
No. 1—Square, Headed and Pointed.

Size, ins.	Approx. No. in 200-lb. keg	Wt. per doz.	Per 100 lbs.
½x 8	410	6 lbs.	$17.00
½x 9	335	6¾ lbs.	$17.00
⅝x10	220	11¾ lbs.	$17.00
¾x11	153	19¼ lbs.	$17.00
⅞x12	92	26 lbs.	$17.00
1 x12	70	34 lbs.	$17.00

No. 3—For U Bar Harrows.

Pointed, with Thread and Nut.

Size, ins.	Bolt part, ins.	Wt. per doz.	Each
½x8	7/16x2⅛	5½ lbs.	$0.18



No. 4—For Pipe Harrows.

Pointed, with Thread and Nut.

Size, ins.	Bolt part, ins.	Wt. per doz.	Each
½x8	7/16x2⅛	5¾ lbs.	$0.19
⅝x8	7/16x2⅛	8 lbs.	$0.23

No. 6—For 14-Tooth Harrows.

⅝x⅞x11 inches, diamond shape. Wt. per doz., 9¾ lbs. ..... Each, $0.32

Harrow Tooth Clamps

No. 35 Steel.

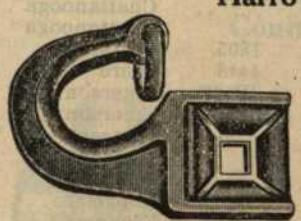
No. 36 Malleable.

For U-shaped Harrow Bar and No. 1 Teeth.

Weight per dozen, No. 35, 2½ lbs.; No. 36, 3 lbs.

	Each
No. 35A—Steel, for ½-inch teeth, with bolt	$0.20
No. 35B—Steel, for ⅝-inch teeth, with bolt	$0.22
No. 36A—Malleable, for ½-inch teeth, with bolt	$0.22
No. 36B—Malleable, for ⅝-inch teeth, with bolt	$0.24
Extra Bolts for Steel Clamps	$0.08
Extra Bolts for Malleable Clamps	$0.08

Harrow Hooks



Square part is 1¾ ins. square. 7/16-in. hole. Length over all, 3⅞ ins. Weight per dozen, 5½ lbs.

No. H30....Per doz., $2.70

Width at beam, ⅝ in.; length, 4 ins. Weight per dozen, 5 lbs.

No. H24....Per doz., $2.70

No. H31 Harrow Hook

This is the same style as No. H30, except the square is 2 inches long and 1¾ inches high with 7/16-inch hole in center and length over all 5¼ inches. Weight per dozen, 9 lbs.

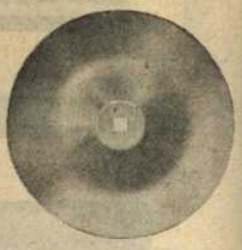
No. H31 ..... Per doz., $3.20

Harrow Discs

Regular Concave Harrow Discs.

Diam., ins.	Kind	Gauge	Hole, ins.	Concave, ins.	Finish	Each
14	Regular	10	¾, ⅞ sq.	1 1/16	Natural	$1.30
15	Regular	10	¾, ⅞ sq.	1 1/16	Natural	$1.60
16	Regular	10	¾, ⅞ sq.	1½	Natural	$1.80
18	Regular	10	¾, ⅞ sq.	1 13/16	Natural	$2.40
20	Regular	9	¾, ⅞ sq.	1 13/16	Natural	$3.60
16	Regular	10	⅞ sq.	1½	Pol. & Blued	$2.10
18	Regular	10	⅞ sq.	1 13/16	Pol. & Blued	$2.80
20	Regular	9	⅞ sq.	1 13/16	Pol. & Blued	$3.80
16	Plow Turn	11	⅞ sq.		Pol. & Blued	$2.10

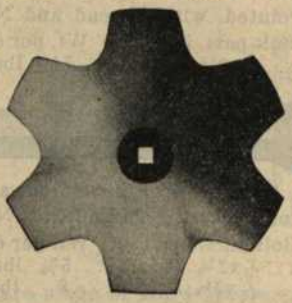
On regular Harrow Discs the natural finish will be furnished unless otherwise specified. On 14 to 20-inch Discs, orders must state whether ¾ or ⅞-inch hole is wanted.



Plow Turn Harrow Discs.

Cutaway Harrow Discs

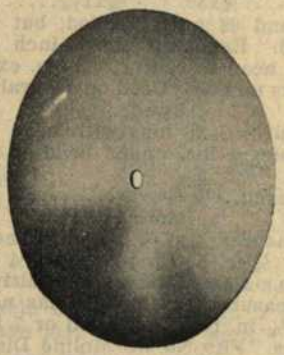
Polished and Blued.



Diam., ins.	Gauge	Sq. Hole	Concave	Points	Each
16	10	⅞	1½	6	$2.30
18	10	⅞	1 13/16	6	$2.90
20	9	⅞	1 13/16	6	$3.70

Blank Plow Discs

Black, not polished.



Can be fitted to practically any make of Disc Plow by drilling extra holes.

Diam., ins.	Kind	Gauge	Hole, ins.	Concave, ins.	Finish	Each
20	Regular	7/32 in.	1 sq.	3⅞	Natural	$7.40
24	Regular	7/32 in.	1 r'nd	3 11/16	Natural	$6.70
26	Regular	7/32 in.	1 r'nd	3⅞	Natural	$7.40
24	Regular	7/32 in.	1 1/16 r'nd	3¾	Natural	$6.70
26	Regular	7/32 in.	1 1/16 r'nd	4	Natural	$7.40
24	Regular	7/32 in.	1 1/16 sq.	3¾	Natural	$6.70
26	Regular	7/32 in.	1 1/16 sq.	4	Natural	$7.40

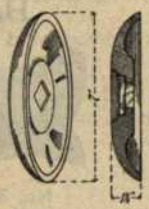
On your orders be sure to state size of Disc and size and shape of hole.

Disc Harrow Bumpers

This is to meet the demand for a Bumper for use on Disc Harrows. Note the countersink for shaft head which decreases the wear. ¾ or ⅞-inch square hole. Weight, 5 lbs.

No. 913—With ¾-inch square hole.
Per doz. $8.00

No. 914—With ⅞-inch square hole.
Per doz. $8.00



Fitted Plow Discs

One side ground and polished.

Will fit accurately the machines for which they are intended.

BE SURE TO GIVE SIZE WANTED ON YOUR ORDER.

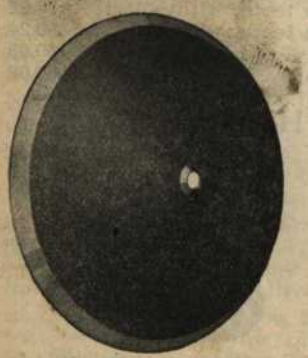
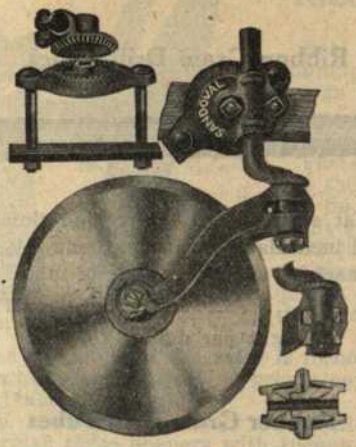


Illustration shows countersunk center hole used on Chattanooga, Hancock, Hapgood, Kingman and Newell Sanders.

No.	To Fit Name of Plow	Diam., ins.	Thickness, ins.	Center Hole	Outside Bolt Holes	Each
	Chattanooga	24	7/32	1 -in. Rd. C. S.	0	$ 7.50
	Chattanooga	26	1/4	1 -in. Rd. C. S.	0	$ 9.50
1805	Deere	24	1/4	1/4-in Round	5	$ 9.00
4448	Deere	26	1/4	1/4-in. Round	5	$10.50
W57S	Emerson	24	1/4	1 1/4-in Round	4	$ 9.00
W1018S	Emerson	26	1/4	1 1/4-in. Round	4	$10.50
	Hancock	24	7/32	1 -in. Rd. C. S.	0	$ 7.50
	Hancock	26	1/4	1 -in. Rd. C. S.	0	$ 9.50
	Hapgood	24	7/32	Countersunk	0	$ 7.50
	Hapgood	26	1/4	Countersunk	0	$ 9.50
CR42	Kingman	24	1/4	1 -in. Rd. C. S.	0	$ 7.50
CR43	Kingman	26	7/32	1 -in. Rd. C. S.	0	$ 9.50
CR44	Kingman	24	7/32	1 -in. Rd. C. S.	0	$ 7.50
CR45	Kingman	26	7/32	1 -in. Rd. C. S.	0	$ 9.50
RD69	Moline (Rotary Dutchman)	24	7/32	1 1/16-in. Round	2	$ 7.80
RD239	Moline (Rotary Dutchman)	26	1/4	1 1/16-in. Round	2	$ 9.30
	Moline (Southern Chief)	24	1/4	1 1/16-in. Round	3	$ 9.00
	Newell Sanders	24	7/32	1 -in. Rd. C. S.	0	$ 7.50
	Newell Sanders	26	1/4	1 -in. Rd. C. S.	0	$ 9.50
	Oliver (for Fordson Tractor Plow)	24	1/4	¾-in. Round	6	$ 9.00
S1587	P. & O. (Canton)	24	7/32	1 -in. Round	4	$ 9.00
S3009	P. & O. (Canton)	26	1/4	1 -in. Round	4	$10.50

Sandoval Coulters



Has adjustable clamp with one bolt and can be set in any direction by simply turning up this one bolt. Will fit right or left hand wood or iron beam plows.

Made with 1, 1¼ or 1½ inch standard. We can furnish either with or without the clamps for attaching to plow. Clamps are included on all orders unless otherwise specified. Approx. weight, No. 114 complete, 21 lbs.; No. 214 complete, 27 lbs. Others proportionate.

	Each Without Clamp	Each With Clamp
No. 112—12-inch blade, 1 -inch standard	$ 5.70	$ 6.70
No. 113—13-inch blade, 1 -inch standard	$ 5.80	$ 6.80
No. 114—14-inch blade, 1 -inch standard	$ 6.10	$ 7.10
No. 213—13-inch blade, 1¼-inch standard	$ 7.30	$ 8.30
No. 214—14-inch blade, 1¼-inch standard	$ 7.60	$ 8.60
No. 215—15-inch blade, 1¼-inch standard	$ 7.70	$ 8.70
No. 216—16-inch blade, 1¼-inch standard	$ 8.20	$ 9.20
*No. 316—16-inch blade, 1½-inch standard	$11.00	$12.00
*No. 318—18-inch blade, 1½-inch standard	$12.50	$13.50

Items marked * shipped only from factory.

Repairs for Sandoval Coulters

For 1-inch Standard

No. 1 Standard ..... Each, $1.20
No. 8 Clamp Bar..... Each, $0.60
No. 22 Female Half Hub..... Each, $0.60
No. 23 Male Half Hub..... Each, $0.70
No. 28 Collar and Set Screw..... Each, $0.50
No. 29 Cone Nut ..... Each, $0.50
No. 33 Fork ..... Each, $1.60
No. W489 Band Hub Cone..... Each, $0.50
No. B3 Clamp Bolt, ½x2½..... Each, $0.20
No. B4 Hub Bolt, ½x4¾..... Each, $0.20
No. B1 Strap Bolt, ½x4½..... Each, $0.20
No. B2 Clamp Bolt, ½x1½..... Each, $0.20
No. 37 Clamp Ring ..... Each, $1.00
No. 38 Clamp Block ..... Each, $0.90
No. 39 Clamp, Complete..... Each, $3.10

For 1¼-inch Standard

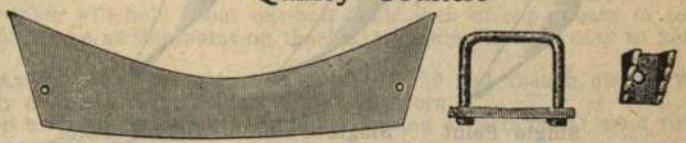
No. 3 Standard ..... Each, $1.70
No. 8 Clamp Bar..... Each, $0.60
No. 34 Male Half Hub for Nos. 215 and 216.... Each, $0.80
No. 35 Female Half Hub for Nos. 215 and 216.. Each, $0.70
No. 36 Banded Hub Cone for Nos. 215 and 216.. Each, $0.60
No. 22 Female Half Hub for Nos. 213 and 214.. Each, $0.60
No. 23 Male Half Hub for Nos. 213 and 214.... Each, $0.70
No. 489 Banded Hub Cone for Nos. 213 and 214. Each, $0.50
No. 50B Fork..... Each, $2.70
No. 51 Bumper and Set Screw..... Each, $0.60
No. 57 Clamp Ring ..... Each, $1.10
No. 58 Clamp Block ..... Each, $1.00
No. W492 Cone Nut..... Each, $0.50
No. B9 Clamp Bolt, ⅝x2¾..... Each, $0.20
No. B1 Strap Bolt, ½x4½..... Each, $0.20
No. B8 Hub Bolt, ½x5¼..... Each, $0.20
No. B9 Clamp, Complete..... Each, $3.55

Blank Fin Cutters

No. 9 made of ¼-inch steel and No. 10 made of $\frac{5}{16}$-inch steel. Polished and Blued.

No. 9.....Each, $1.40 No. 10.....Each, $1.60

Quincy Coulters



Made of ¼-inch steel, polished and blued. Furnished with ⅜x1½-inch bolt in each end.

In ordering, state whether with or without clamp, and, if clamp is wanted, then for wood or steel beam.

No. 813—With Clamp. . . . . Each, $2.70
No. 812—Without Clamp. . . . . Each, $2.20

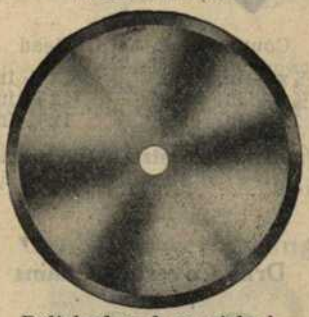
Straight Coulter

Made of 2¼x⅝-inch steel, 24 inches long. In ordering, state whether with or without clamp, and, if clamp is wanted then for wood or steel beam.

No. 814—With Clamp. . . . . Each, $2.50
No. 815—Without Clamp. . . . . Each, $2.20

Coulter Blades

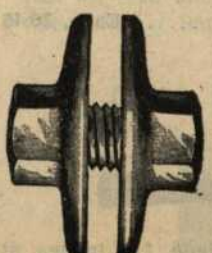
Without Hubs.



Polished and varnished.

Inches	12	13	14	15	16	18
Each	$2.20	$2.30	$2.60	$2.70	$3.60	$4.70

Coulter Hubs



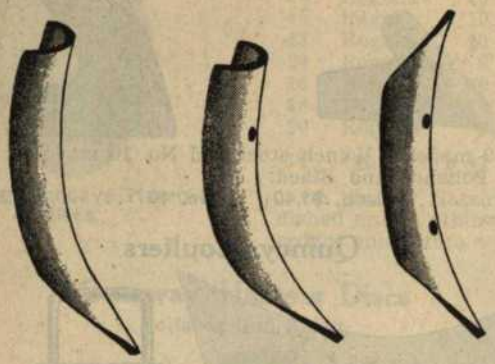
Plain.

Sandoval.

No. 52—Plain Pattern. . . . . Each, $1.20
No. 61—Sandoval pattern for 14-in. and smaller blades. . . . . Each, $1.30
No. 62—Sandoval pattern for 15-in. and larger blades. . . . . Each, $1.50

Grain Drill Repairs

Grain Drill Points



Single Point blank. | Single Point with hole. | Double Point with holes.

We can furnish these points to fit practically any make of grain drill.

5-hoe, single point, blank. . . . . Each, $0.19½
8-hoe, single point, blank. . . . . Each, $0.25½
8-hoe, double point, blank. . . . . Each, $0.28
5-hoe, single point, with one hole. . . . . Each, $0.19½
8-hoe, single point, with one hole. . . . . Each, $0.25½
8-hoe, double point, with one hole. . . . . Each, $0.28
8-hoe, double point, with two holes. . . . . Each, $0.29

Drill Point Rivets

Countersunk. Oval Head.

¾x⅞ in. ¾x⅜ in.
⅞x⅞ in. ⅞x⅜ in.
1x⅞ in. 1x⅜ in.

⅞x⅞ is the most staple size. One pound in a package.

Drill Point Rivets. . . . . Per lb., $0.24

Drill Covering Chains

An exceedingly valuable device. They cover the seed evenly and provide a dust mulch. Our chains are heavy and will work on all makes of drills.

No. 73. . . . . Each, $0.46

Weight each, 2 lbs.

Wire Lister Tubes

Can be attached on any lister. Made 1⅛ inches at flared end, ¾ inch at small end, inside diameter, and 22 inches long. By cutting off, can be made any smaller size wanted. Japanned finish.

No. 78. . . . . Per dozen, $8.90

Weight per dozen, 18 lbs.

Ribbon Grain Drill Tubes

Made of flat spring steel. Japanned finish. About 18 inches long, 1 inch diameter at small end, 1½ at large end. Will fit any machine using this style of tube.

No. 108. . . . . Per doz., $6.00

Weight per dozen, 8¼ lbs.

Rubber Grain Drill Tubes

All our tubes are made with reinforced seam. A special effort is made to always furnish the best quality on the market.

No. 74—22x1⅝x⅞, plain. . . . . Per doz., $5.30

No. 75—24x1⅝x⅞, plain. . . . . Per doz., $6.00

Weight per dozen, 2¼ lbs.

Wire Grain Drill Tubes

This tube can be attached to the receiver on any drill that uses rubber tubes. It is made large enough to fit the largest receiver, and can be made to fit smaller ones by cutting off one or more coils. Regular size of tube is 1¾ inches at flared end, ¾-inch at small end (inside diameter) and 20½ inches long. Japanned finish.

No. 76. . . . . Per doz., $7.20

Weight per dozen, 19½ lbs.

Wire Grain Drill Springs

No. 7—14 inches long, 1 inch outside diameter, made of No. 7 wire. . . . . Dozen, $5.60

Weight per dozen, 10 lbs.

No. 9—14 inches long, 1⅜ inches outside diameter, made of No. 9 wire. . . . . Dozen, $5.60

Weight per dozen, 7 lbs.

Corn Drill Brushes

Corn Drill Brushes. . . . . Per doz., $6.00

Weight per dozen, 2½ lbs.

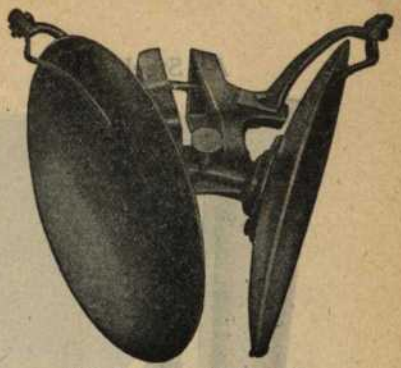
No. 2, 14-inch.

Ideal Disc Furrow Openers

Best adjustments; greatest durability, easiest running; machined journal bearing of superior design found only in the Ideal.

The Ideal is the best device made to use on a corn planter to open a furrow like a lister.

Fastened to the seed tube of the planter, and not the shoe where it will cause clogging. It can be secured to the seed tube at any desired point above the shoe so that seed can be covered just as deep as desired. Simply raising or lowering the rear end of the attachment so places the discs as to cause them to throw different widths of furrow.



No. 1, 10 and 12-inch.

Between the angle of the axles is formed an opening which will hold about one-half cubic inch of cup grease to continually lubricate the bearing. A grease cup is fitted in the frame at this point on the No. 1, making it very easy to keep plenty of grease on the rollers.

The No. 1 will fit practically any planter except the Avery. It is made in two sizes with 10 and 12-inch discs. We can also furnish these openers with 10-inch discs especially designed for the Black Hawk Planters.

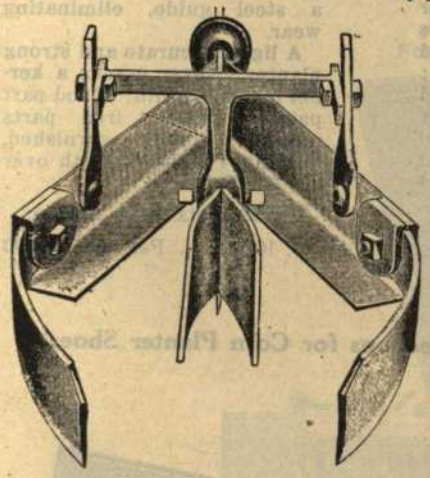
The No. 2 is intended for Avery Planters. It can also be used on any other planter having a rectangular seed tube and high wheels, such as Deere, Rock Island, Sattley, Janesville, etc.

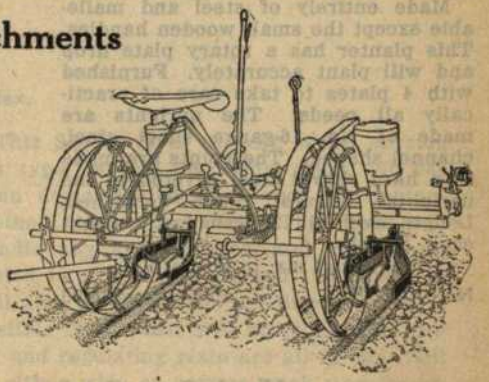
Approx. weight: 10-in., 34 lbs.; 12-in., 38 lbs.; 14-in., 52 lbs.

No. 1-10, with 10-inch discs, set complete for 2-row planters.....Per set, $19.00
No. 01-10, with 10-inch discs, for Black Hawk planters only, set complete for 2-row planters.....Per set, $19.00
No. 1-12, with 12-inch discs, set complete for 2-row planters.....Per set, $19.50
No. 2-14, with 14-inch discs, set complete for 2-row planters.....Per set, $20.00

We can furnish repairs for Ideal Disc Furrow Openers by shipping direct from factory. Orders should give numbers on old parts.

Vivion Planter Gauge Attachments





Attaches to any Corn Planter.

By the use of this attachment every hill is planted the same depth. Every kernel will be covered.

All clods, large or small, are either crushed or removed six inches from each side of the row.

It allows no dirt on the corn except what comes under the Gauge, this being all pulverized before the Hoe gets to cover the corn.

The Tee and Clamp are malleable and the runners and hoes are steel. Length over all, 21 inches. Adjustable up and down 3 inches. Hoes adjustable to almost any position. The Vivion Attachment can be put on any of the regular planters without drilling holes. Weight per set, 19 lbs. A set includes two attachments which is enough for a two-row planter.

Vivion Planter Gauge Attachment.....Per set, $13.00

We can furnish repairs for Vivion Planter Gauge Attachments by shipping direct from factory. Orders should give numbers on old parts.

Check Rower Wire

Furnished in 10, 20, 40 or 80 rod bundles, as required.

In ordering, state whether 3-4, 3-6 or 3-8 check is wanted. We can also furnish other distance checks on special order from factory. Weight 52 lbs. per 100 rods.

Check Rower Wire.....Per 100 rods, $12.00

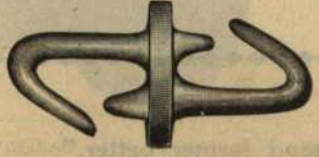
Check Rower Springs

We can furnish these Springs to fit practically any make of planter. In ordering, state the planters for which they are to be used. In case of uncertainty, send us a sample of the old spring to be duplicated. Unless otherwise specified we send the pattern in most demand.

Check Rower Springs.....Each, $0.30

Check Rower Buttons

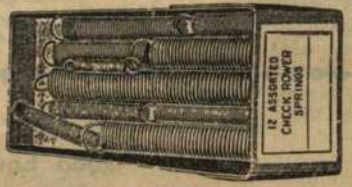
No. 0



No. 6

No. 0—Steel wire, put up 156 in a box.....Per box, $0.70
No. 0—In small quantities.....Per doz., $0.10
No. 6—Malleable.....Per doz., $0.70

Check Rower Spring Assortment



Contains one dozen Assorted Springs that will fit practically any planter.

No. 37 Assortment.....Each, $2.50

Hand Planters

All Steel

Made entirely of steel and malleable except the small wooden handles. This planter has a rotary plate drop and will plant accurately. Furnished with 4 plates to take care of practically all needs. The uprights are made of No. 16-gauge sheet steel, channel shaped. The points are made of a hard shovel steel, riveted to the uprights. Natural finish varnished. Length over all, 32½ inches; weight each, 8½ lbs.

Packed six in a crate.

No. 1027.....Per doz., $40.00

Acme

Two-hand slide type. Segmental slide is of pressed steel, adjustable to vary the drop; hopper bottom, hopper and conveyor tube are of steel; jaws pressed steel, riveted to hardwood sides; cutoff is of clock spring steel; handles smooth and comfortable and finished with waterproof non-sticky preparation; sides varnished, steel parts natural color; two coats of varnish. Weight, 5 lbs.; length, 34 inches.

Packed six in a carton.

No. 1029.....Per doz., $20.00

Segment One-Hand

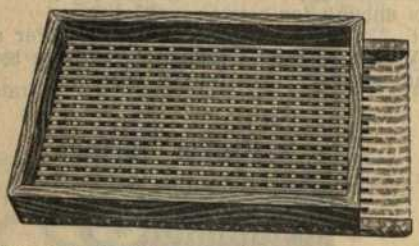
Operated with only one hand. The segment slides in a steel guide, eliminating wear.

A light, accurate and strong planter. Never cracks a kernel or skips a hill. Wood part painted yellow, iron parts natural finish varnished. Weight, 4½ lbs. Length over all, 34 inches.

Packed six in a carton.

No. 1023.....Per doz., $33.50

Hand Corn Graders

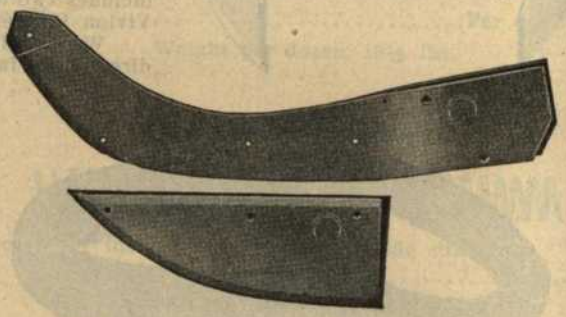


Every farmer should grade his seed corn because IT PAYS. The increase on one acre where the seed is graded with this grader will more than pay the cost of it. Keep one of these in sight in your store with some shelled corn for demonstrating and you will have no trouble to sell them.

It has double screen and gives three grades with one operation. Top frame measures 10½x16½ inches inside, and bottom is 3½ inches longer. Weight each, 3½ lbs. Packed 6 in a bundle.

Hand Corn Graders.....Per doz., $24.00

Renewable Sections for Corn Planter Shoes



Will fit any planter and any farmer can put them on. Can be attached without removing old runner. Each subsequent pair will interchange. No new holes to drill. Display a worn planter shoe, with a renewable section attached, and note the result in sales. Weight per pair, 5 lbs.

No. 847.....Per pair, $2.70

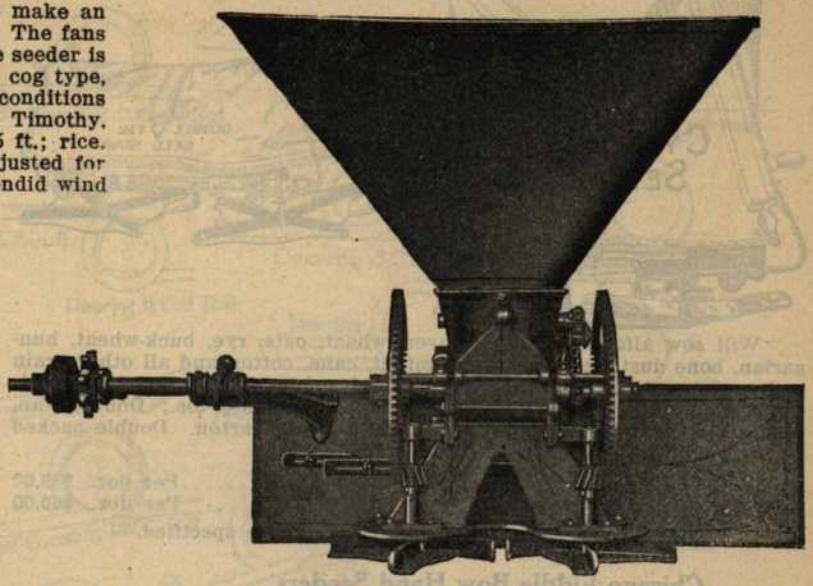
"Good Equipment makes a good farmer better."

Leader Double Fan Seeder

For Telegraph Code, See Page Front of Index.

This Seeder is so constructed that each fan distributes half of the seed. The fans are so shaped as to make an even distribution over the full width of the cast. The fans are shaped so as to hold the seed at the end while seeder is not running. The driving gears are of the worm cog type, which are absolutely positive. Under ordinary conditions this seeder will throw approximately as follows: Timothy. 30 ft. wide; clover, 45 ft.; oats, 45 ft.; alfalfa, 45 ft.; rice. 60 ft.; barley, 65 ft.; wheat, 65 ft. It can be adjusted for different amounts of seed per acre. It has a splendid wind shift and will handle either damp or dry oats.

The grass seed attachment enables the farmer to sow clover or other grass seed at the same time as the larger grains, and in the desired quantities. This attachment is operated by a chain, which makes it positive. Furnished either with or without Grass Seed Attachment. Unless otherwise specified Grass Seed Attachment will be included. Nicely finished in red. Weight, 150 lbs.



No. 6GS—With Grass Seeding Attachment. . . . . Each, $46.00

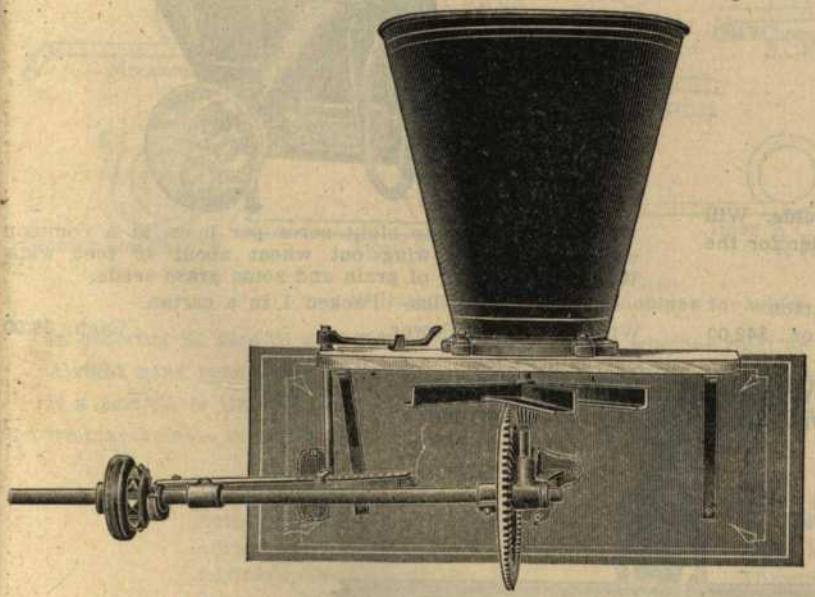
No. 6WO—Without Grass Seeding Attachment. . . . . Each, $43.00

No. B55—Large Sprocket for Wagon Wheel. . . . . Each, $ 5.60

Other repairs can be furnished for shipment from factory. Orders must specify number on old parts.

Stoco Endgate Seeder

For Telegraph Code, See Page Front of Index.



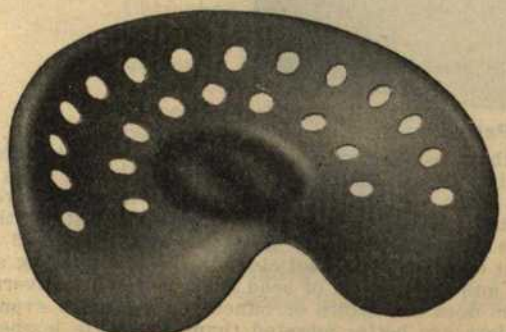
This Seeder is of the cog wheel stirring pin type, in use for many years. It has been demonstrated as a very satisfactory method for sowing seed. The Stoco will handle any kind of seed, and can be adjusted to sow to any desired thickness. It will also distribute dry fertilizer. It has a positive clutch that will not slip. The cut-off and regulating plate are all in one. Will fit either wide or narrow track wagon box. Weight, 99 lbs.

No. 3. . . . . Each, $29.00

No. B55—Large Sprocket for Wagon Wheel. . . . . Each, $ 5.60

Other repairs can be furnished from factory. Orders must specify number on old parts.

Pressed Steel Seats



Plain black steel, not varnished. 17½ inches wide at widest point and 14 inches front to back. For cultivators, plows, disc harrows, planters, mowers, tractors, etc. Packed 10 in a bundle. Weight per bundle, 43 lbs.

No. 200. . . . . Each, $1.50

Hand Seed Stripper

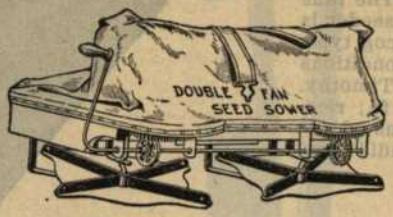
Blades are made of steel and frame of wood work. Well made, nicely painted and varnished. This tool is especially designed for stripping blue grass seed, and under ordinary conditions one man can strip 20 bushels of seed per day. Can also be used to good advantage in gathering oats from poor spots or where oats are too short for binding. Weight each, 5 lbs.

No. 11K. . . . . Each, $4.00

Packed 4 in a crate.

Cyclone Hand Seeders

Either Single or Double Fan.



Will sow alfalfa, timothy, clover, wheat, oats, rye, buck-wheat, hungarian, bone dust, red top, turnip, millet, cane, cotton and all other grain and seeds perfectly even and any desired amount to the acre, and from 40 to 60 acres a day. Single Fan, weight each, 3½ lbs.; Double Fan, weight each, 5½ lbs. Single packed 2 and 3 in a carton. Double packed 1 in a carton.

Single Cyclone Seeders.....Per doz., $39.00
Double Cyclone Seeders.....Per doz., $60.00

Single pattern shipped unless otherwise specified.

Lightning Seeders (Tin Horn)

It is cheap, simple and durable. Has great capacity and will spread the seed evenly from 30 to 40 feet.

It gives control over seed on a circle of 8 feet before it leaves the tube, and the wind has no chance to blow seed into bunches before it strikes the ground.

Tube is in four sections. Length extended 30 inches. Weight each 12 ounces. Packed 6 in a carton.

Lightning Seeders.....Per doz., $15.70

Chicago Fiddle Bow Hand Seeders

Operated with a steel bow through a swivel guide. Will do the same work as the Cyclone. A good Seeder for the price.

Weight each, 3½ lbs. Packed 2 and 3 in a carton.

Chicago Fiddle Bow Seeders.....Per doz., $42.00

Wisconsin Seeders

Cahoon Pattern.

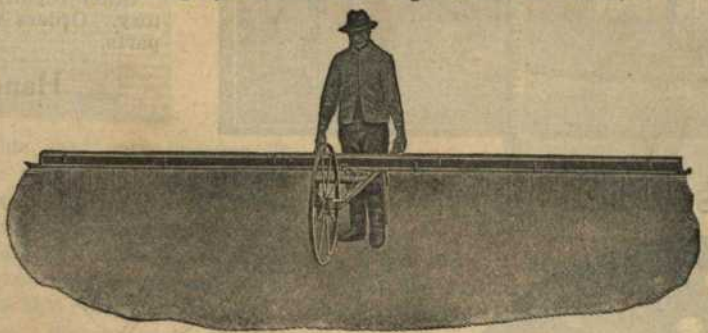
Sows from four to eight acres per hour, at a common walking gait, throwing out wheat about 40 feet wide. Will sow any kind of grain and some grass seeds.

Weight each, 9 lbs. Packed 1 in a carton.

Wisconsin Seed Sower.....Each, $9.00

Stowe Wheelbarrow Grass Seeder

For Telegraph Code, See Page Front of Index.

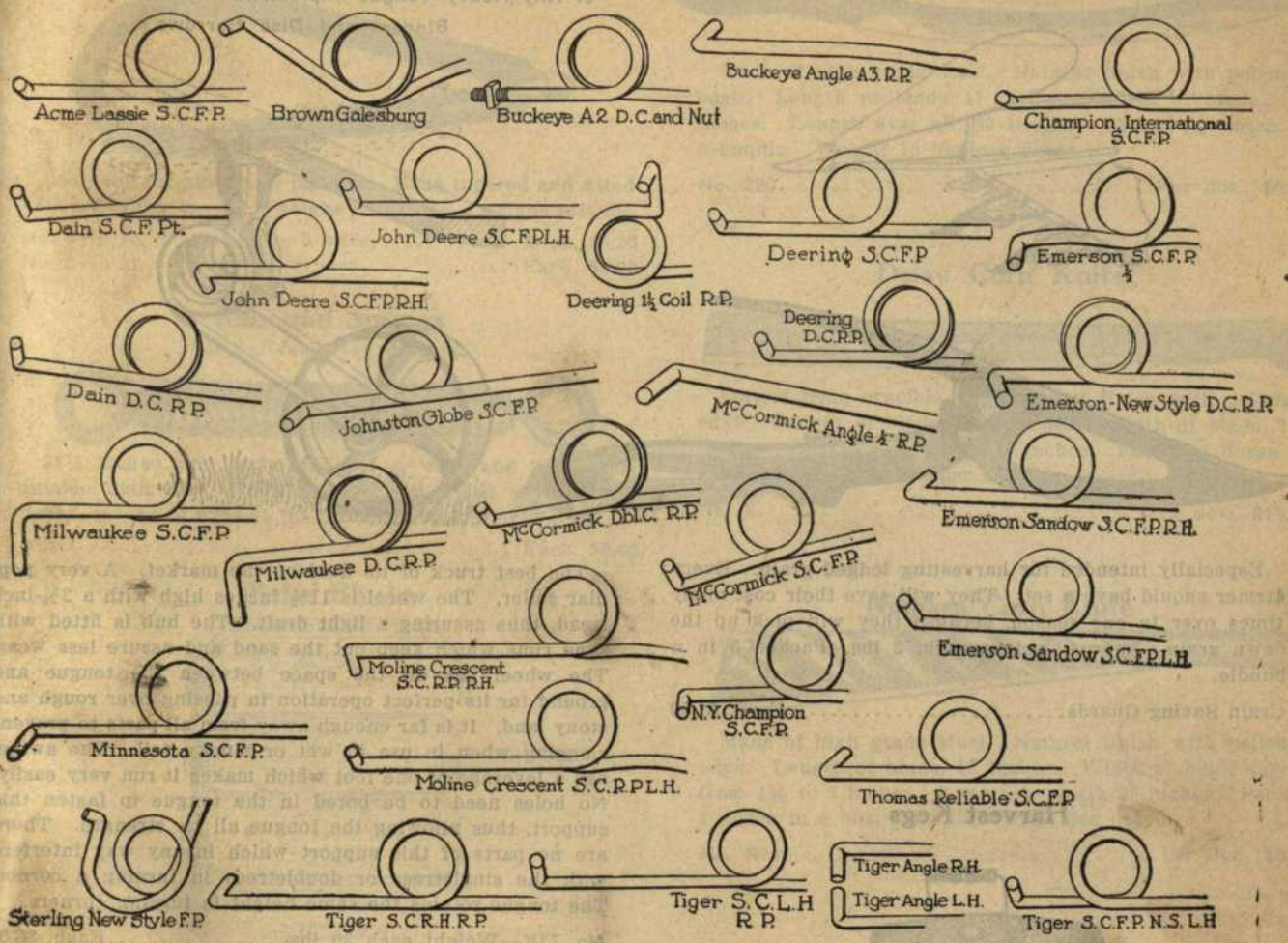


This Seeder Sows Alfalfa Perfectly.

The Wheelbarrow Grass Seeder has demonstrated that it is the most accurate and economical machine for sowing clover, timothy, alfalfa and other small seeds broadcast; does not throw the seed into the wind, but puts it on the ground lightly and evenly, thus insuring a good, even catch. It runs easily, and sows evenly in windy weather. The quantity of seed sown is accurately governed by the wheel, which moves correspondingly slow or fast as the machine runs over the ground. This Seeder is constructed on up-to-date principles. It has a strong steel wheel 32 inches in diameter, with 1¼x¼-inch steel tire. It is operated by a device that engages the wheel close to the hub, having a lever and working correspondingly easy. It is instantly thrown out of gear and the amount of seed sown is quickly governed by changing the pin in the index plate as thereon indicated. This seeder does not injure or bunch the seed, but evenly distributes it the full length of the hopper. The double hopper type seeders are better adapted than the single hopper type to chaffy seeds, such as red top, orchard grass and clean bluegrass, but for other seeds the single hopper will prove very satisfactory. Hopper painted green, wheelbarrow varnished. Weight of seeder complete, 46 to 50 pounds.

No. 11S-14, 14-foot Single Hopper Seeder.....Each, $21.50
No. 11S-16, 16-foot Single Hopper Seeder.....Each, $22.50
No. 12S-14, 14-foot Double Hopper Seeder.....Each, $26.00

Steel Hay Rake Teeth



Will accurately fit the machines for which they are intended.

In ordering be sure to give full information, stating whether right or left hand, coil or angle and with or without nut. A right hand rake tooth is one where the angle turns to the right when standing behind the rake looking forward. If a pattern is wanted other than those listed below, send us a full size paper diagram showing angle, coil and curve and we may be able to match it up with some of our regular patterns.

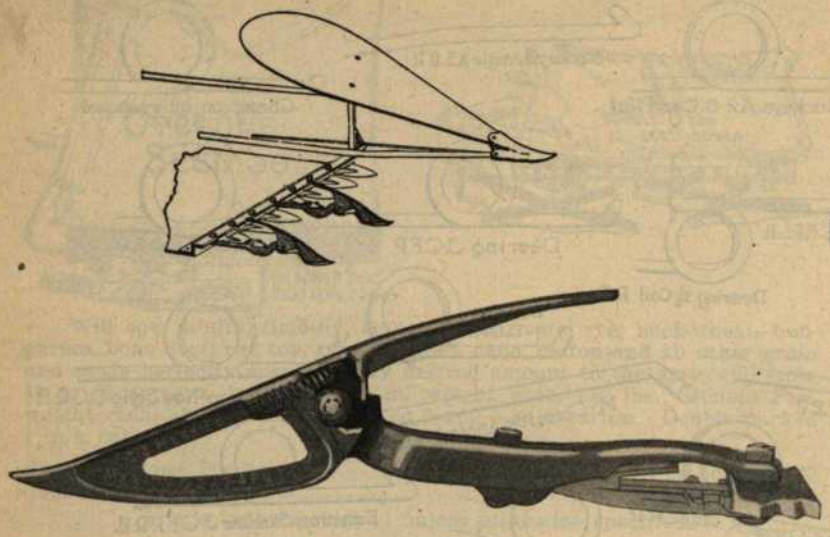
Acme, Coil and Flat Point
Acme, Lassie, Coil, ½ inch
Adriance, Single Coil, Fl. Pt.
Adriance, Double Coil, Ro. Pt.
Buckeye, Drop, No. A3
Buckeye, Coil & Nut, No. A2
Champion, International, Coil
Champion, N. Y., Fl. Pt.
Champion International, Double Coil, ⅞-inch Fl. Pt.
Crescent, Moline, R. & L., Fl. Pt.
Dain
Deere, Coil, R. & L., Fl. Pt.
Deering, Single Coil, Fl. Pt.
Deering, Double Coil, Angle
Emerson, S. C. F. P. N. S.
Emerson, Sandow, Single Coil, R. & L.
Emerson, Single Coil, Fl. Pt. ½-inch.
Fuller & Johnson, Hand Dump, Single Coil
Fuller & Johnson, Victor, Coil, Fl. Pt.
Milwaukee
Minneapolis, Wood, Single Coil, Fl. Pt.
Moline, Crescent, R. & L.
McCormick, Double Coil
McCormick, Angle, ½ inch
McCormick, Coil, Fl. Pt.
Osborne, Coil and Nut
Osborne, Fl. Pt. Coil
Plano, Jones, Double Coil
Plano, Single Coil
Thomas, Reliable, Coil, Fl. Pt.
Victor, Fuller & Johnson, Coil
Wood. Minneapolis, Single Coil, Fl. Pt.
Wood, Walter A., Coil, Fl. Pt.

⅜-inch Teeth, all patterns, weight each, approximately, 2 lbs. . . . . Each, $0.56
⅞-inch Teeth, all patterns, weight each, approximately 2½ lbs. . . . . Each, $0.64
½-inch Teeth, all patterns, weight each, approximately 3 lbs. . . . . Each, $0.66

For Sweep Rake Teeth, see Index.

Grain Saving Guards

For Telegraph Code, See Page Front of Index.



Especially intended for harvesting lodged grain. Every farmer should have a set. They will save their cost many times over in one season, because they will pick up the down grain. Approx. weight each, 2 lbs. Packed 5 in a bundle.

Grain Saving Guards.....Each, $1.60

Harvest Kegs

These kegs are particularly intended for carrying water to the fields and are provided with a handle. Made of hardwood with the hoops carefully fitted, and very substantial. Made in 1, 2 and 3-gallon sizes, with bung holes shaped for pouring. 1 and 2-gallon size tied in bundles of 6; 3-gallon in bundles of 4.

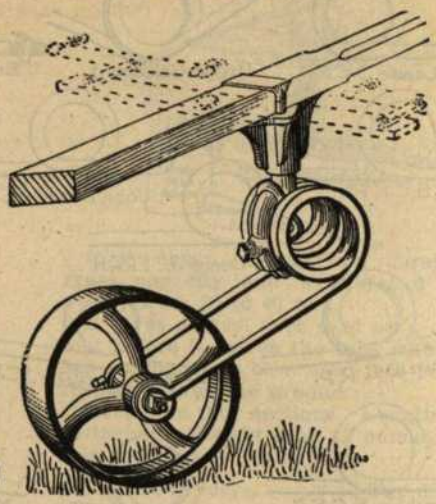
1 Gal., weight per doz., 40 lbs.....Per doz., $15.70
2 Gal., weight per doz., 60 lbs.....Per doz., $19.00
3 Gal., weight per doz., 80 lbs.....Per doz., $22.00

For Water Bags and Thermic Bottles,

see page 26.

Keystone Tongue Truck

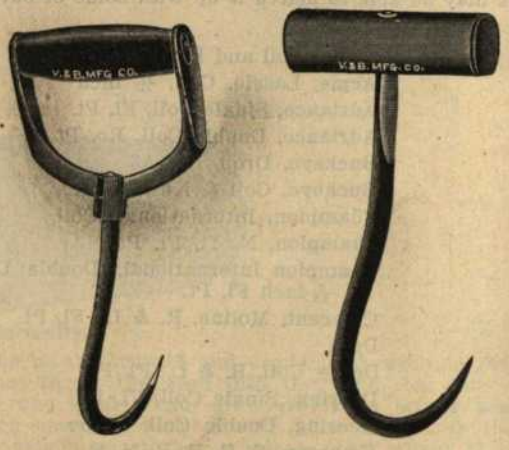
For Any Heavy Tongue Implement. Commonly Used For Binders and Disc Harrows.



The best truck of its kind on the market. A very popular seller. The wheel is 11½ inches high with a 2¾-inch tread, thus assuring a light draft. The hub is fitted with sand rims which keep out the sand and assure less wear. The wheel has all the space between the tongue and ground for its perfect operation in passing over rough and stony land. It is far enough away from all parts to prevent clogging when in use in wet or mucky soil. The swivel has a leverage of one foot which makes it run very easily. No holes need to be bored in the tongue to fasten this support, thus allowing the tongue all its strength. There are no parts of this support which in any way interfere with the singletrees or doubletrees in turning a corner. The tongue retains the same height in turning corners.

No. 71K—Weight each 30 lbs.....Each, $8.00

Hay Hooks



No. 0 No. 1

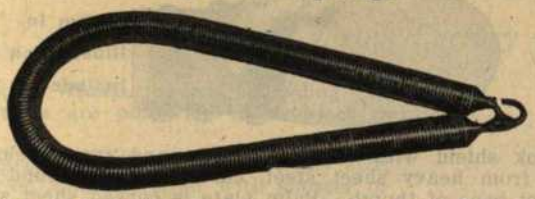
No. 0 has malleable handle, 4½x4¾ inches. Length under handle 4½ inches. ⅜-inch steel.

No. 0—Weight per dozen 7 lbs.....Per doz., $10.00

No. 1 has black finished hardwood handle, 5¼ inches long. Length under handle 8 inches. $\frac{7}{16}$-inch steel.

No. 1—Weight per dozen 13 lbs.....Per doz., $6.00

Hay Press Springs



Long coil for pitman or plunger. Ends tapered and fitted with swivel hooks. No. 1 weighs 14 lbs. No. 2 weighs 16½ lbs.

No. 1—2 in. x 55 in., No. 5 wire.....Each, $4.20
No. 2—2 in. x 60 in., No. 3 wire.....Each, $5.20

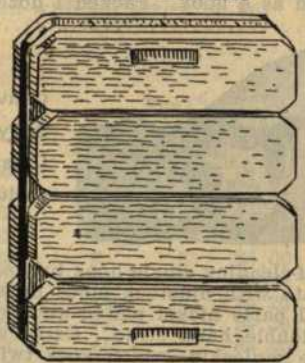
Rebound Springs

For Self-feed Hay Presses.

21¼ inches long, body made of $\frac{7}{16}$ wire, and 2$\frac{7}{16}$ inches outside diameter. Ends tapered and fitted with swivel hooks instead of eyes as illustrated. No. 3 weighs 9 lbs.

No. 3.....Each, $3.40

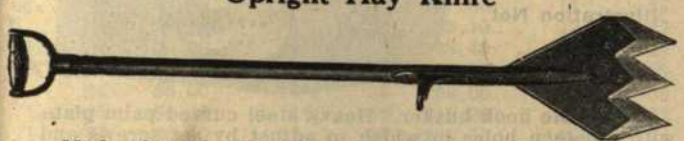
Baler Blocks



Furnished in two sizes, No. 191 for bales 14x16 inches, and No. 192 for bales 14x18 inches. Made of hard wood

No. 191—Baler Block for 14x16 bales.....Each, $2.50
No. 192—Baler Block for 14x18 bales.....Each, $2.70

Upright Hay Knife



Made of steel. Length over all, 4 feet. Each section is 3 inches wide. Has step for the foot. Sections are removable. Malleable D handle with wood grip. Weight each, 7 lbs. Packed 6 in a box.

No. 218.....Per doz., $24.00
No. 213—Extra Sections.....Per doz., $ 4.80

Sickle Edge Hay Knife

Made of high grade steel. Length of blade, 2 ft. 5 in. Consists of four sections, scalloped sickle edge. Sections are riveted to angular malleable iron bar. Adjustable handle with wood grip. Weight each, 5 lbs. Packed ½ dozen in a box.

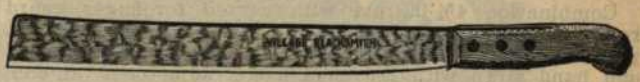
No. 315.....Per doz., $28.00

Clipper Corn Knife

Made of high grade steel. Natural finish with polished edge. Length of blade 17 inches. Width of blade, 1¼ inches. Length over all, 23 inches. Packed ½ dozen in a bundle. Weight 10 lbs. per dozen.

No. 220.....Per doz., $6.60

Daisy Corn Knife



Forged from crucible steel. Anvil finish with polished edge. Length of blade, 16½ inches. Width of blade, 1¾ inches. Length over all, 23½ inches. Packed 1 dozen in a box. Weight 15 lbs. per dozen.

No. 2.....Per doz., $11.00

Niagara Corn Knife

Made of high grade steel. Natural finish with polished edge. Length of blade, 15 inches. Width of blade tapers from 1½ to 3 inches. Length over all, 22 inches. Packed 1 dozen in a box. Weight 14 lbs. per dozen.

No. R116.....Per doz., $8.00

Corn Huskers

Clark's original "Corn Queen." Improved and strengthened cold rolled steel plate, palm centered with teeth on the edge of plate to brush away thin husks. Will also help grip the ear when breaking. Large hand part with thumb strap and divided hand strap, 2½-inch wrist band, twice around the wrist, with wrist bone hole. Packed 1 dozen in a box.

No. C28.....Per doz., $12.30

Clark's cold rolled steel, nickel plated pin. Split leather shield and double compartment adjustable finger strap. Packed 1 dozen in a box.

No. 100Y.....Per doz., 2.30

Corn Huskers—Continued

Heavy sheet steel pin 4½ ins. long, nickel plated and polished. Three compartments with lace thong adjustment. Leather is chrome muleskin. Packed 3 dozen in a box.
No. 2000.....Per doz., $1.40

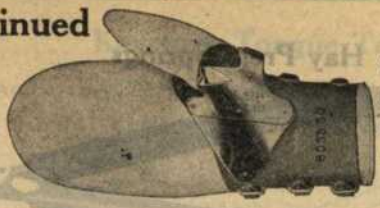
Combination 4¾-in. pin with curved forefinger guard reinforcement made of heavy tool steel, nickel plated and polished. 1¾-in. chrome grain leather forefinger guard and hand strap with japanned eyelet adjustment at end. Packed 1 dozen in a box.
No. 2800.....Per doz., $3.20

Round steel pin of forged tool steel, highly nickeled. Special riveted forefinger guard. Sliding sleeve and leather hand protector, also adjustable double strap and buckle with brass thumb nut and loop which is solidly attached to end of pin. Leather parts best grade chrome grain leather. Packed 1 dozen in a box.
No. B.....Per doz., $7.00

Round steel pin of forged tool steel, highly nickeled, in combination with a forefinger cot of pliable chrome grain leather with rivet and steel washer protection. Sliding sleeve and leather hand protection, also adjustable double strap and buckle with brass thumb nut and loop which is solidly attached at end of pin. All leather parts of best grade chrome grain leather. Packed 1 dozen in a box.
No. BB.....Per doz., $8.80

Curved palm with corrugated hook made of one piece of heavy sheet steel, buffed nickel finish. Muleskin palm leather and double reinforced hand strap Heavy chrome wristband twice around wrist. Packed 1 dozen in a box.
No. 053.....Per doz., $5.60

Curved heavy sheet steel palm plate and hook from one piece, nickel plated and polished. Palm pad and wrist strappings of russet stock leather. Two straps with nickel-plated buckles. Packed 1 dozen in a box.
No. 678.....Per doz., $4.20

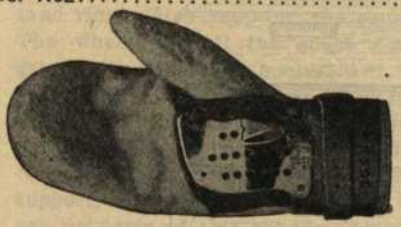


Canvas Mitten Shown in Illustration Not Included.

Hook shield with corrugated spur and special slotted arm, from heavy sheet steel, curved to fit around and protect base of thumb. Palm plate is curved sheet steel, nickel plated and polished. Palm pad and double strapped wide wristband from one piece of chrome muleskin. Packed 1 dozen in a box.
No. 050.....Per doz., $5.90

Canvas Mitten Shown in Illustration Not Included.

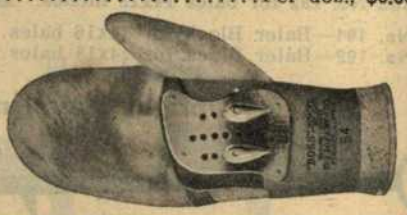
Corrugated steel hook with long shank, adjustable to several lateral positions on a curved palm plate of heavy steel by means of a lock plate with lug and nut. Nickel plated and polished. Extra large palm pad, hand strap and double strapped wide wristband made of chrome muleskin. Steel wrench furnished with each husker which can be bent and used as a hook. Packed 1 dozen in a box.
No. R02.....Per doz., $5.50



Canvas Mitten Shown In Illustration Not Included.

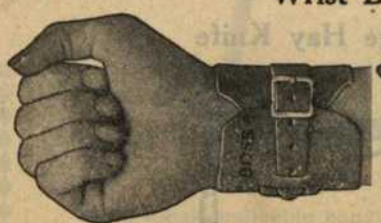
Adjustable self-cleaning single hook husker. Heavy steel curved palm plate with nineteen holes in which to adjust hook. All metal parts nickel plated and polished. Large palm pad and double hand strap. Extra wide wristband made of chrome muleskin, which goes twice around the wrist. Packed 1 dozen in a box.
No. 048.....Per doz., $6.60

Canvas Mitten Shown in Illustration Not Included.



Adjustable hook husker. Heavy steel curved palm plate with nineteen holes in which to adjust by set screws and lug, two malleable spur hooks. All metal parts nickel plated and polished. Adjustment screws are instantly accessible. Large palm pad, hand strap and wide wristband are of chrome muleskin. Packed 1 dozen in a box.
No. 054.....Per doz., $7.70

Wrist Bands



Selected chrome leather twice around wrist, 2¾ inches wide. Nickel plated buckle and link.
Packed 1 dozen in a box.
No. 2.....Per doz., $4.90

Good grade glove kip leather, 2½ inches wide. Two straps and plated buckles.
Packed 1 dozen in a box.
No. 21X....Per doz., $3.40

The above Huskers are furnished either right or left hand. Right hand shipped unless otherwise specified.

Sprocket Wheels

From Factory Only, Milwaukee, Wis.

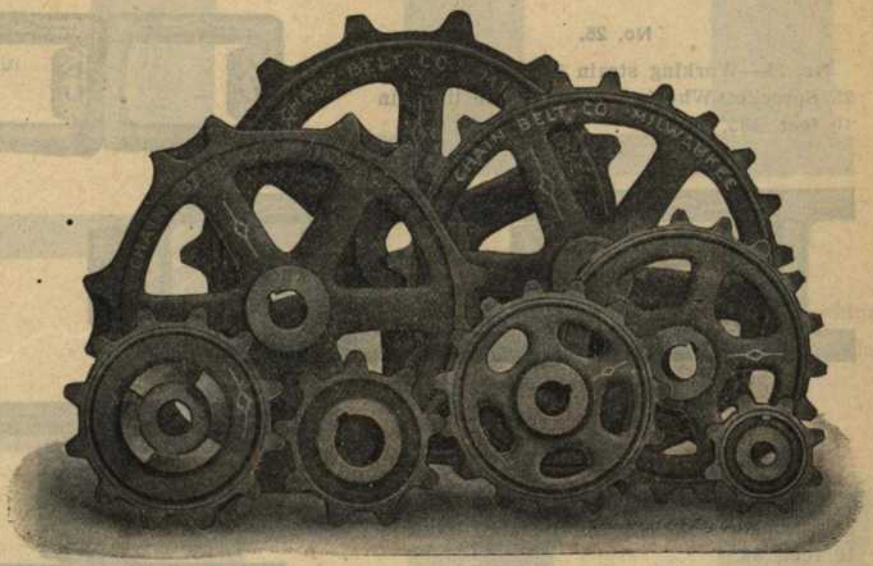
Sprocket Wheels made according to specifications are positively not subject to return.

Wheels can be bored to almost any size, and can be made to order with shorter or longer hub on one side, or both sides. On account of the great number of sizes, sprocket wheels are not carried in regular stock. It should be understood, therefore, that all orders are accepted with the understanding that shipment will be made from factory. Different size wheels have different size bore, depending on size most commonly used. Other size bore furnished at slight extra cost.

If the wheel you want is not listed give us the different measurements, diameter, number of teeth, size of bore, and size of chain to be used and no doubt we can get it for you.

Furnished **bored and set screwed or key-seated.** If more than one key-seat and one set screw are wanted, an extra charge will be made.

In ordering be sure to give diameter, number of teeth, size of chain, size of bore, and whether wanted with set screw or key-seat.



For Chain Nos. 25, 31.			For Chain No. 32.			For Chain Nos. 33, 34.			For Chain No. 42.			For Chain Nos. 35, 45, 55.		
Diam. Ins.	No. of Teeth	Price	Diam. Ins.	No. of Teeth	Price	Diam Ins.	No. of Teeth	Price	Diam. Ins.	No. of Teeth	Price	Diam. Ins.	No. of Teeth	Price
1½	5	$3.30	2	5	$3.70	2¾	6	$4.00	2½	5	$4.00	2½	5	$4.10
1¾	6	$3.40	2¼	6	$3.80	3	7	$4.10	2¾	6	$4.20	3	6	$4.20
2	7	$3.50	2¾	7	$3.90	3½	8	$4.20	3¼	7	$4.30	3¾	7	$4.40
2½	8	$3.60	3	8	$4.00	4	9	$4.40	3½	8	$4.40	4¼	8	$4.60
2¾	9	$3.70	3½	9	$4.10	4½	10	$4.60	4	9	$4.60	4¾	9	$5.00
3	10	$3.80	3¾	10	$4.20	5	11	$4.80	4½	10	$4.80	5¼	10	$5.40
3¼	11	$3.90	4¼	11	$4.30	5½	12	$5.00	4¾	11	$5.10	5¾	11	$5.80
3½	12	$4.00	4½	12	$4.40	6¼	14	$5.60	5¼	12	$5.40	6	12	$6.20
3¾	13	$4.10	4¾	13	$4.60	6½	15	$6.00	5¾	13	$5.70	7	13	$6.80
4	14	$4.20	5¼	14	$4.80	7	16	$6.40	6¼	14	$6.00	7¼	14	$7.40
4¼	15	$4.30	5¾	15	$5.10	8	18	$7.20	6½	15	$6.40	7¾	15	$7.90
4¾	16	$4.40	6	16	$5.40	8½	19	$7.60	7	16	$6.80	8½	16	$8.40
5	17	$4.60	7½	20	$6.60	9	20	$8.00	7½	17	$7.20	8¾	17	$8.90
5¼	18	$4.80	8¼	22	$7.20	9¾	22	$8.80	8	18	$7.60	9½	18	$9.40
5½	19	$5.00	8½	23	$7.50	10¾	24	$9.40	8½	19	$8.10	10	19	$9.90
5¾	20	$5.20	9	24	$7.80	11	25	$9.70	8¾	20	$8.60	10½	20	$10.40
6	21	$5.40	9¼	25	$8.10	12	27	$10.40	9¼	21	$9.00	11	21	$10.80
6¼	22	$5.60	9½	26	$8.40	12½	28	$10.80	9½	22	$9.40	11½	22	$11.20
6¾	23	$5.80	10	27	$8.70	13	29	$11.40	10½	24	$10.20	12	23	$11.70
7	24	$6.00	10¼	28	$9.00	13½	30	$12.00	11¾	27	$11.60	12½	24	$12.20
7¼	25	$6.20	11¾	32	$10.20	14¼	32	$12.60	12¼	28	$12.00	13	25	$12.70
7½	26	$6.40	12	33	$10.50	15¼	34	$13.40	14	32	$14.00	14¼	27	$13.80
7¾	27	$6.60	12½	34	$10.80	16	36	$14.00	15¾	36	$15.60	14½	28	$14.40
8	28	$6.80	13¼	36	$11.60	18¼	41	$15.80	16½	38	$16.40	15	29	$14.90
8¾	30	$7.20	14	38	$12.20	18¾	42	$16.20	17	39	$16.80	15½	30	$15.40

Prices on other sizes on application.

Salem Elevator Buckets

Made of blue annealed sheet steel.

These Buckets are especially adapted for use with cotton, canvas, alfalfa, leather or rubber belting in mill and elevator work.

Size, ins. Width	Projection	Gauge	Each
2½	2½	24	.15
3	2½	24	.15
3½	2½	24	.15
3	3	22	.15
3½	3	22	.15
4	3	22	.15
4½	3	22	.15
4	3½	22	.17
4½	3½	22	.19
5	3½	22	.22
5	4	20	.25
5½	4	20	.30
6	4	20	.35
7	4½	20	.40
8	5	19	.35
9	5	19	.40
10	5	19	.45
10	5½	19	.48
9	6	18	.50
10	6	18	.56
11	6	18	.62
12	6	18	.69
13	6	18	.76

Size, ins. Width	Projection	Gauge	Each
14	6	18	.83
15	6	18	.90
16	6	18	.97
18	6	18	1.11
20	6	18	1.25

MALLEABLE CHAIN BELTING

The following illustrations show some of the best selling Agricultural Patterns in both plain and special links. We can furnish many other styles not shown in catalog. If you do not find what you want listed here write us, being careful to give complete description, or better still, send us a sample link.

CUTS ARE FULL SIZE

No. 25.

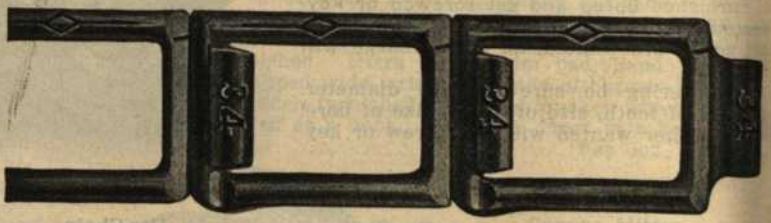
No. 25—Working strain 120 lbs. Use No. 25 Sprocket Wheels. Approximate links in 10 feet, 133.

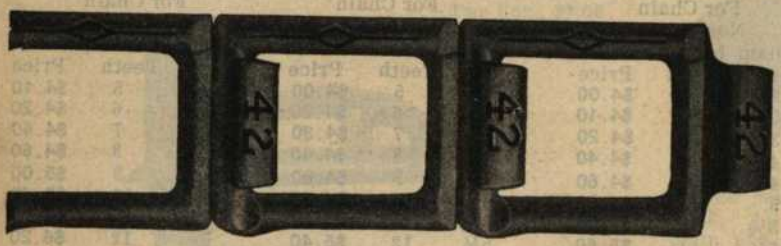
No. 32.

No. 32—Working strain 180 lbs. Use No. 32 Sprocket Wheels. Approximate links in 10 feet, 104.

No. 34.

No. 34—Working strain 220 lbs. Use No. 34 Sprocket Wheels. Approximate links in 10 feet, 86.



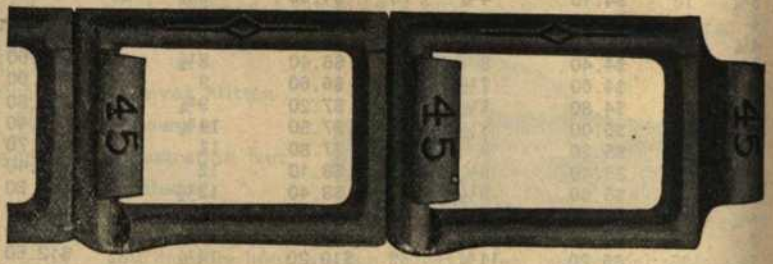


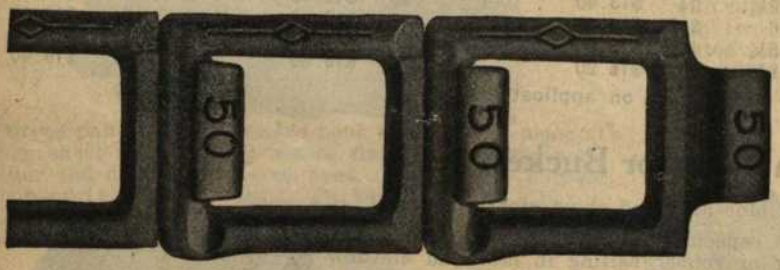
No. 42.

No. 42—Working strain 250 lbs. Use No. 42 Sprocket Wheels. Approximate links in 10 feet, 88.

No. 45.

No. 45—Working strain 270 lbs. Use No. 45 Sprocket Wheels. Approximate links in 10 feet, 74.



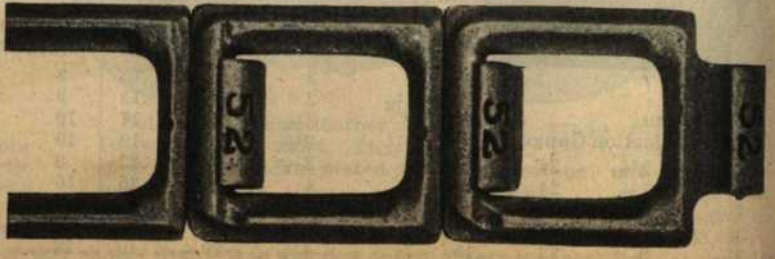


No. 50.

No. 50—Working strain 320 lbs. Use No. 50 Sprocket Wheels. Approximate links in 10 feet, 87.

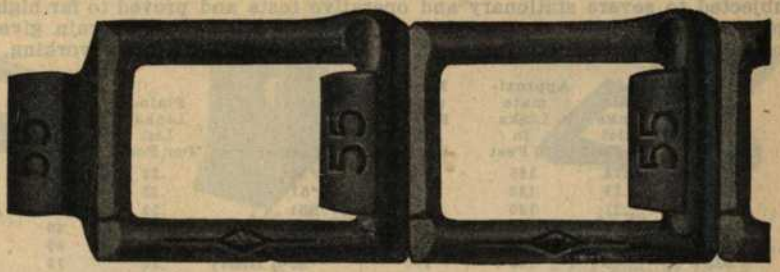
No. 52.

No. 52—Ribbed side bar. Working strain 380 lbs. Use No. 52 Sprocket Wheels. Approximate links in 10 feet, 80.



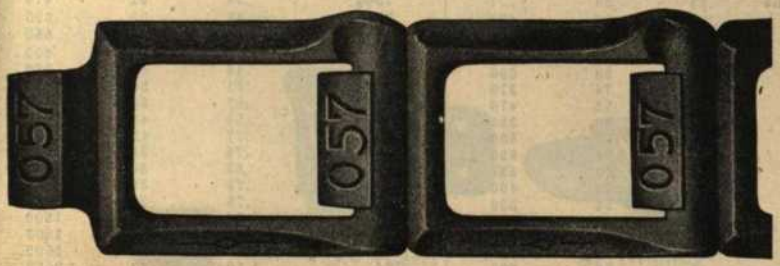
MALLEABLE CHAIN BELTING—Continued

CUTS ARE FULL SIZE



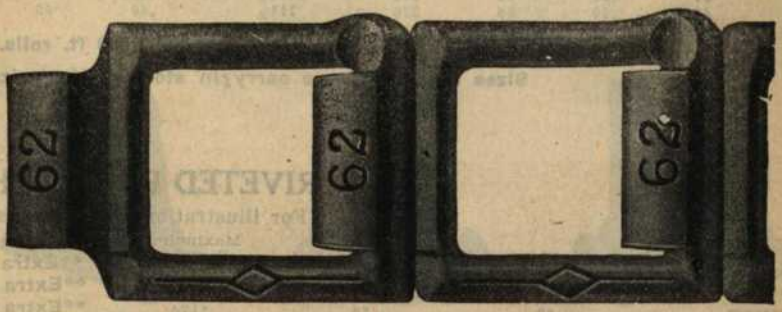
No. 55.

No. 55—Working strain, 370 lbs. Use No. 45 Sprocket Wheels. Approximate links in 10 ft., 74.



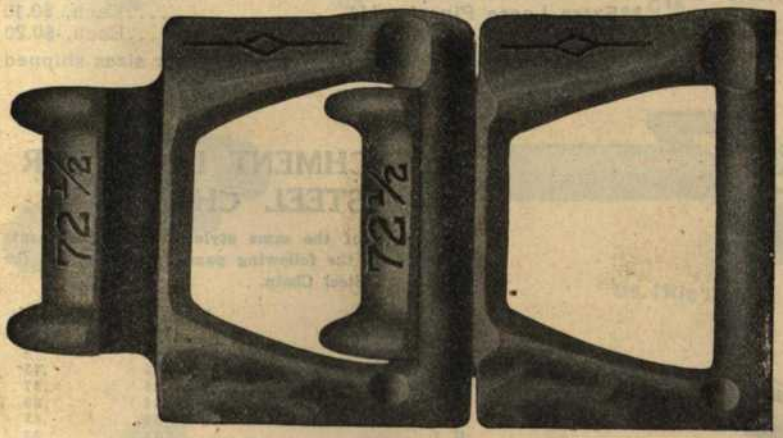
No. 057.

No. 057—Shoe link, flat view. Working strain 370 lbs. Use No. 45 Sprocket Wheels. Approximate links in 10 ft., 74.



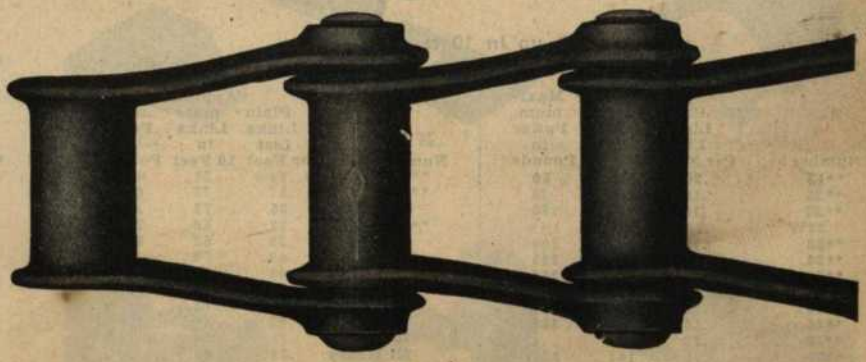
No. 62.

No. 62—Working strain 520 lbs. Use No. 62 Sprocket Wheels. Approximate links in 10 ft., 73.



No. 72½.

No. 72½—Working strain 770 lbs. Use No. 62 Sprocket Wheels. Approximate links in 10 ft., 73.



PINTLE CHAIN.

Made with riveted pins or cottered in various sizes. Used principally for drive chains.

WE CAN ALSO FURNISH CHAIN FOR TRUCKS AND TRACTORS. SEE INDEX.

MALLEABLE CHAIN BELTING—Continued

Manufacturer's Standard List, Effective January 1st, 1920.

All our Chain Belt is made of the very best refined Malleable Iron. The links are accurately pitched to length and subjected to severe stationary and operative tests and proved to far higher speed than should ever be required in practical operation and finally are tested to fully double the working strain given in the list, to insure as perfect goods as it is possible to produce. It is not best to over-strain Chain Belt in working, nor run it too fast.

Number	Plain Links List Per Foot	Approximate Links in 10 Feet	Maximum Power in Pounds
**23	.23	185	80
**024	.18	133	90
025	.21	120	110
**25	.15	133	120
31	.24	133	130
032	.25	133	170
**32	.16	104	180
**33	.15	86	200
**34	.17	86	220
**34½	.22	103	210
**35	.18	74	170
36½	.21	81	250
**37	.17	60	170
38	.17	60	250
**4-Bar 39	.31	75	300
**042	.26	88	250
**42	.19	88	250
**3-Bar 43	.40	79	400
**44	.22	81	260
**45	.16	74	270
046	.25	74	350
46	.22	74	270
**47	.22	74	270
48	.20	60	270

Number	Plain Links List Per Foot	Approximate Links in 10 Feet	Maximum Power in Pounds
**50	.22	87	320
**51	.23	104	320
851	.29	105	320
**052	.30	80	380
**52	.23	80	380
**52½ Heavy	.30	79	480
52½ Light	.23	80	...
54	.20	.82	475
**055	.24	74	350
**55	.20	74	370
056	.33	80	600
**057	.24	74	370
**57	.24	52	470
**58	.30	80	380
**062	.33	73	550
**62	.27	73	520
**62½	.30	73	520
**063	.35	79	400
65	.29	56	550
**66	.32	60	430
**67	.29	52	550
71	.44	72	925
**071½	.49	58	800
71½	.40	60	900

Number	Plain Links List Per Foot	Approximate Links in 10 Feet	Maximum Power in Pounds
**072	.47	73	720
**72	.48	59	710
**072½	.50	72	720
**72½	.52	73	770
075	.50	58	770
**75	.27	46	670
75½	.34	51	670
76	.43	52	625
**76½ or E-1	.35	58	650
**77	.32	52	600
**78	.44	46	820
83	.51	30	830
85	.57	30	1270
**88	.50	46	960
88½	.77	46	1200
93	.75	30	1250
95	.63	30	1450
**103	.73	39	1600
108	.75	25½	1650
110	.78	25½	1800
114	.98	37	1800
122	1.30	20	2500
124	1.10	30	2500
146	1.25	20	2500

Put up in 10 ft. rolls.

Sizes marked ** we carry in stock. Other sizes shipped from factory.

RIVETED PINTLE CHAIN.

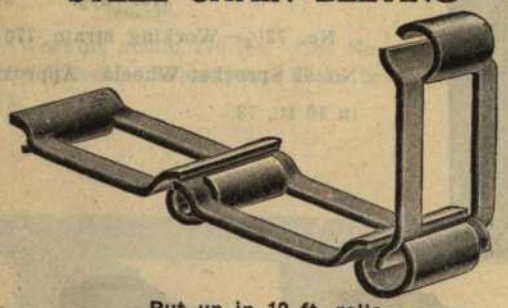
For illustration see previous page.

Number	Per Foot Riveted	Approximate Links in 10 Ft.	Maximum Power in Pounds
**H4	.64	60	1100
**H567	.60	56	1170
**HA567	.75	56	1400
**H630	.80	73	1450
**K303	.85	73	1250
151	.65	74	1000

**Extra Loose Pins for H567	Each, $0.10
**Extra Loose Links for H567	Each, $0.20
**Extra Loose Pins for HA567	Each, $0.10
**Extra Loose Links for HA567	Each, $0.20
**Extra Loose Pins for H4	Each, $0.10
**Extra Loose Links for H4	Each, $0.20

Sizes marked ** we carry in stock. Other sizes shipped from factory.

STEEL CHAIN BELTING



Put up in 10 ft. rolls.

Each size can be used in place of the same size malleable chain.

Number	Plain Links List Per Foot	Approximate Links in 10 Feet	Maximum Power in Pounds
**15	.20	223	50
**25	.15	133	75
**32	.16	104	150
32W	.20	104	.....
**33	.15	86	200
**34	.17	86	225
**35	.18	74	250
**42	.19	88	300
44	.22	80	...
**45	.16	74	350
**50	.22	87	...
**51	.23	104	375
**52	.22	80	500
**52½	.30	79	...
**55	.20	74	450
55 Special	.22	74	...

Number	Plain Links List Per Foot	Approximate Links in 10 Feet	Maximum Power in Pounds
**57	.24	52	600
**62	.27	73	650
62W Heavy	.35	73	...
**66	.32	60	700
67	.29	52	700
071½	.49	58	...
72	.48	59	...
**72½	.50	73	...
D (H-630)	.48	73	...
75	.27	46	750
**M (H567)	.38	56	800
E1 Heavy	.38	60	...
76½ Heavy	.38	59	...
77	.32	52	800
78	.44	46	1000
88	.50	46	1200

Sizes marked ** we carry in stock. Other sizes shipped from factory.

ATTACHMENT LINKS FOR STEEL CHAIN.

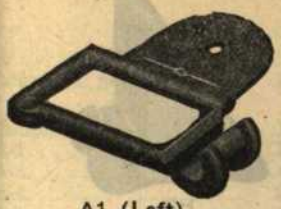
These are of the same style as the attachments illustrated on the following pages, but these are for use only on Steel Chain.

Number	For Steel Chain Number	Per foot
A 3	25	.46
E 1	25	.45
K 1	25	.37
C 1	32	.39
K 5	32	.42
K 1	33	.33
K 1	34	.33
A 1	42	.37
A 1 Special	45	.31
**A 2	45	.38
C 1	45	.32
G27	45	.46
K 1	45	.33
K 5	45	.42
A 1 Special	55	.51
**A 2	55	.47
C 1	55	.37
G27	55	.52
K 1	55	.39
K 5	55	.49
A 3	62	.68
C 1	62	.45
K 5	62	.49
K 1	67	.52
K 1	75	.51
A12	77	.68
K 1	77	.74
K 1	78	.66
K 1	88	.76

Sizes marked ** we regularly carry in stock. Others shipped from factory with short delay.

ATTACHMENTS FOR MALLEABLE CHAIN.

For List of Sizes, see Page 691



A1 (Left).

A2 (Right).

A14 (Right).

A3-78 (Left) on Nos. 78 and 88. Other sizes similar to A2.

A4 (Left) on No. 103, No. 25 has one hole.

A7 (Right.)

A11 (Left).

A12 (Left).

C28

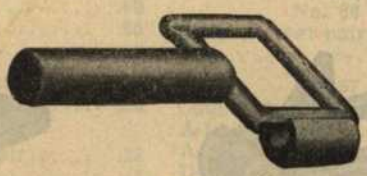
C8

C15

C1

C2

D5 (Right).



D3 (Right).

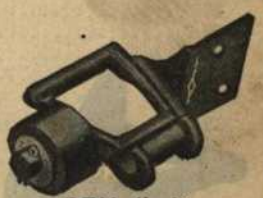
DK (Left). With Roller.

DD.

E1.

E2.

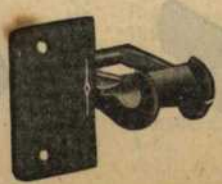
E12.



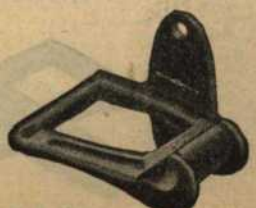
DF14 (Left)

F2.

F8.



F12 (Right).



G1 (Left).

G6 (Right).

ATTACHMENTS FOR MALLEABLE CHAIN—Continued.

For List of Sizes, see Page 691

G19 (Left).

G27 (Right).

H1.

H2.

K1.

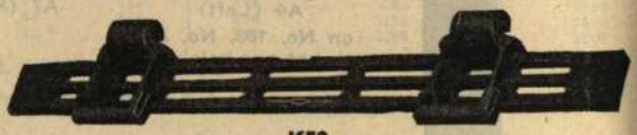
K2.

K3.

K6.

K5.

K40.


K50.

L2.

L3.

M1.

M3.

RR.

R1 (Left).

R2.

R3 (Right).

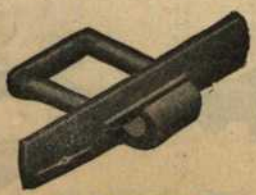
R8 (Left).

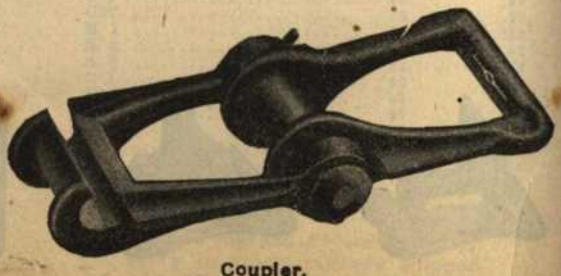
R26 (Left).

S1.

S5.

Scraper No. 1.


No. 3 Scraper.


Coupler.

ATTACHMENTS FOR MALLEABLE CHAIN—Continued

Patterns marked * we carry in stock. Patterns not marked are usually in stock at factory.
Manufacturers' Standard List, Effective January 1, 1920.
List prices are per foot except as noted.

No. 23

Couplers, per pair	.23

No. 25

*Couplers, per pair	.15
A-1	.31
A-3	.46
A-4	.37
C-1	.41
G-1	.45
K-1	.37
M-1	.37
R-26	.28
S-1	.40

No. 32

*Couplers, per pair	.16
A-1	.29
A-3	.36
C-1	.39
D-3	.55
E-1	.27
G-1	.52
K-1	.35
K-3	.62
K-5	.42
K-6	.64
M-1	.57

No. 33

Couplers, per pair	.15
A-1	.26
C-1	.36
D-3	.53
E-1	.25
K-1	.33
K-3	.59
K-5	.43
K-6	.55
M-1	.39
S-1	.35

No. 34

*Couplers, per pair	.17
*A-1	.31
*C-1	.36
C-2	.45
*K-1	.33

No. 35

Couplers, per pair	.18
A-1	.32
*C-1	.34
E-1	.28
K-1	.39
*S-1	.36

No. 37

*K-5	.84
*L-3	.31

No. 39—4 Bar

*L-3	.55

No. 042

*A-1	.47

No. 42

*Couplers, per pair	.19
*A-1	.37
A-3	.65
C-1	.35
*K-1	.38
K-3	.75
K-5	.49
K-6	.72
*S-1	.38

No. 43—3 Bar

K-3	.85

No. 44

A-3	.48

No. 45

*Couplers, per pair	.16
*A-1	.31
*A-2	.38

No. 45—Continued.

*A-3	.49
A-12	.44
A-14	.46
*C-1	.32
*C-15	.48
C-22	.82
D-3	.61
D-5	.51
D-K	.50
E-1	.26
E-12	.25
*F-2	.36
G-1	.28
G-27	.29
*K-1	.33
K-1 Couplers, per pair	.39
*K-3	.64
*K-5	.42
K-40	.53
K-91	.80
*L-2	.30
M-1	.51
M-3	.51
*S-1	.35
*S-5	.51
*Scraper No. 1, each	.10
No. 2, each	.11
No. 3, each	.12
No. 4, each	.14

No. 47

L-4	.50

No. 48

A-3	.55
K-1	.62

No. 50

Couplers, per pair	.22

No. 51

Couplers, per pair	.23
A-1	.56
K-1	.60
K-5	.65
S-1	.60

No. 052

Couplers, per pair	.30

No. 52

Couplers, per pair	.23
A-1	.41
A-3	.46
A-14	.65
B-14	1.00
C-1	.48
D-3	.80
D-5	.64
E-1	.50
F-2	.52
G-1	.58
K-1	.42
K-5	.79
S-1	.50

No. 52½—Heavy

Couplers, per pair	.30

No. 55

*Couplers, per pair	.20
*A-1	.34
*A-2	.47
*A-3	.54
A-11	.45
A-14	.48
*C-1	.37
C-8 (C5)	.56
C-28	.75
E-1	.37
F-2	.41
*G-27	.52

No. 55—Continued.

*K-1	.39
*K-5	.49
K-40	.60
K-91	.85
*L-2	.41
*L-21	.37
M-O	.37
*M-1	.56
*S-1	.37
*S-5	.40
Scraper No. 19, each	.15
Scraper No. 20, each	.10

No. 55 Keeper

A-2	.50

No. 057.

G-26	.46
*L-3	.39
L-23	.48

No. 57

Couplers, per pair	.24
A-1	.39
F-2	.56
H-2	.59
K-1	.47
Tube, each	.07

No. 062

Couplers, per pair	.33

No. 62

Couplers, per pair	.27
*A-1	.46
*A-3	.42
A-12	.64
B-14	1.00
C-1	.45
D-5	.60
G-1	.74
K-1	.50
K-5	.49
S-1	.47

No. 66

Couplers, per pair	.32
C-1	.58

No. 67

Couplers, per pair	.29
A-1	.51
A-7	.61
D-5 with 1½-in. roller	1.70
E-1	.47
F-2	.58
G-1	.59
K-1	.52
K-3	.74
Tube, each	.09

No. 072

Couplers, per pair	.47

No. 72½

Couplers, per pair	.52

No. 75

Couplers, per pair	.27
D-5	.79
E-1	.48
F-2	.63
G-1	.78
H-1	.46
H-2	.71
K-1	.51
R-1	.47
R-2	.49

No. 75½

H-2	.50

No. 77

Couplers, per pair	.32
A-1	.55
A-113	.56

No. 77—Continued.

D-5	.64
F-2	.72
G-6	.70
G-19	.90
H-1	.73
K-1	.74
M-3	.83
R-1	.51
R-3	.57

No. 78

Couplers, per pair	.44
A-1	.75
A-3	.93
A-11	.65
D-5	1.24
E-1	.71
F-2	.80
G-1	.90
G-6	.80
G-19	.78
H-1	1.00
H-2	.88
K-1	.66
K-3	1.05
M-3	.94
R-1	.50

No. 83

Couplers, per pair	.51
D-5	.93
K-1	.74
M-3	.97

No. 85

Couplers, per pair	.57
F-2	1.00
G-6	1.10
K-2	.86

No. 88

Couplers, per pair	.50
A-3	1.04
A-11 (2 Holes)	.72
D-5	.93
DF-14 with 1¾-in. roller	1.60
DK with 2-in. roller	1.87
E-1	.87
E-2	.94
F-2	.90
F-8	.94
F-12	1.39
G-1	1.00
G-6	.85
G-19	.94
H-1	.92
H-2	.96
K-1	.76
M-3	1.27
R-1	.58
R-8	.73

No. 95

Couplers, per pair	.63
F-2	1.21
K-2	.97

No. 103

Couplers, per pair	.73
A-4	1.20
A-11	1.12
E-1	1.26
F-2	1.25
F-8	1.40
G-6	1.38
G-19	1.28
H-1	1.20
H-2	1.25
K-1	1.13
K-2	1.18
M-3	1.38
RR	1.15

If attachment wanted is not listed above, send us your order and we may be able to get it on special order from the factory.

Drive Chains

We can furnish Drive Chains complete just the right size and length to fit accurately the machines for which they are intended as listed below.

In ordering, give number, or where no number is shown, give full description.

Number	For	Size of Links	Number of Links in complete Chain	Approximate Length	Price per complete Chain
V506	Acme	H567	42	7½ ft.	$6.20
V506A	Acme	M (Steel)	42	7½ ft.	$8.00
AH305	Acme	H567	59	10½ ft.	$8.50
AH305A	Acme	M (Steel)	59	10½ ft.	$11.00
2029	Adriance, No. 2 Binder	76½	45	7¾ ft.	$4.90
J1427	Adriance, No. 3 Binder	071½	45	7¾ ft.	$6.60
P547	Champion, Binder '02-'06	2216	47	8½ ft.	$7.00
K502	Champion	72	45	7¾ ft.	$6.50
K1276	Champion	72	47	8 ft.	$6.70
K3243	Champion	2216	43	7¾ ft.	$6.40
HZ5595	Deere	H630	55	7½ ft.	$8.20
H1530	Deere, Corn Binder	H630	54	7¼ ft.	$8.00
HZ5250	Deere	H630	56	7½ ft.	$8.20
H5627	Deering	76½	48	8¼ ft.	$5.10
H5619	Deering	72½	54	7½ ft.	$6.80
	Deering	72½	63	8¾ ft.	$7.30
K2014	Deering	72½	50	7 ft.	$6.30
1620	Deering	H4	71	13 ft.	$12.70
K2020	Deering	76½	50	8½ ft.	$5.50
H4561	Deering	H630	55	7½ ft.	$8.20
H6002	Deering	72½ (Steel)	55	7½ ft.	$6.80
Y2523	Deering, Corn Binder	76½	42	7¼ ft.	$4.60
K387	Johnston	072½	57	8 ft.	$6.90
K387C	Johnston	072½	58	8 ft.	$6.90
K387D	Johnston, L. H. Binder	72½ (Steel)	45	6¼ ft.	$5.70
B14	McCormick	H567	43	7¾ ft.	$6.40
BA14	McCormick	HA567	43	7¾ ft.	$7.80
V69	McCormick	H567	43	7¾ ft.	$6.40
VA69	McCormick	HA567	43	7¾ ft.	$7.80
H566	McCormick	H567	42	7½ ft.	$7.60
J334	McCormick	H567	61	11 ft.	$9.00
JA334	McCormick	HA567	61	11 ft.	$10.85
J64	McCormick	H567	60	10¾ ft.	$8.80
JA64	McCormick	HA567	60	10¾ ft.	$10.60
C654	McCormick	H567	32	5¾ ft.	$4.90
B1234	McCormick	H567	42	7½ ft.	$6.20
BA1234	McCormick	HA567	42	7½ ft.	$7.60
CA654	McCormick, Corn Binder	H567	30	5½ ft.	$4.70
CB654	McCormick, Corn Binder	HA567	30	5½ ft.	$5.70
CC654	McCormick, Corn Binder	HA567	32	5¾ ft.	$5.90
HA566	McCormick	HA567	42	7½ ft.	$7.60
Z951	McCormick	M (Steel)	43	7¾ ft.	$8.80
SA330	Milwaukee	72½	50	7 ft.	$6.00
K2008	Milwaukee	52½	50	6¼ ft.	$3.00
K2007	Milwaukee	052	50	6¼ ft.	$3.00
K3228	Minnie	71½	45	7½ ft.	$5.00
8167	Osborne	76½	40	7 ft.	$4.60
8168	Osborne	072	50	7 ft.	$5.40
8169	Osborne	072	55	7¾ ft.	$6.00
8170	Osborne	072	55 and cplrs.	7¾ ft.	$5.90
	Osborne	H630	54	7¼ ft.	$7.90
L2294	Plano	072	56	8 ft.	$6.10
5368	Plano	62	59	8 ft.	$3.30
6312	Plano	072	59	8¼ ft.	$6.30
6313	Plano	072	58	8 ft.	$6.10
9334	Plano, Header	K303	73	10 ft.	$12.00

Items not marked are Malleable Chain.

Sheller Chains

We can furnish chains for power shellers put up either in 10-ft. rolls or in complete chains to fit the various shellers.

No. 37—Chain, with L3 attachment every 7th link.....In 10-ft. rolls, $4.30
No. 39—Chain, with L3 attachment every 7th link.....In 10- ft. rolls, $7.50
No. 45—Chain, with L2 attachment every 7th link.....In 10-ft. rolls, $3.30
No. 55—Chain, with L2 attachment every 7th link.....In 10-ft. rolls, $400.
No. 057—Chain, with L3 attachment every 7th link.....In 10-ft. rolls, $4.30

Staple Sizes of Chain

The purpose of this page is for general information only. Below we give a list of the sizes of chain for machines that are in general use and for which there is considerable demand:

Acme, Binder, No. 45; Reel, No. 42; Elev., No. 42; Packer, No. 50.
Acme, Header, No. 42.
Adriance, Corn Binder, Main Drive, No. 76½; Packer, No. 42; Rear Drive, No. 42; Reel, No. 34.
Adriance, Buckeye Reaper, No. 52.
Advance, Self-Feeder Stacker, Nos. 32, 35.
Advance, Thresher for Beaters, No. 32 (for Windlass 55).
Appleton, Manure Spreader, Nos. 62, 57, 55.
Aspinwall, Potato Planter, No. 33.
Auto Drive, End Gate Seeder, No. 34.
Avery, Corn Drill, No. 25.

Belleville, Thresher, No. 34.
Birdsall, Clover Huller, No. 35; Feeder Bar, No. 55.
Black Hawk, Manure Spreader, Nos. 072, 62.
Buckeye, Elevator, No. 32.
Buckeye, Harv., Rear Drive, No. 45; Main Drive, No. 71½.
Buckeye, Sheller, No. 32.

C. B. and Q, End Gate Seeder, No. 34.
Caldwell, Manure Spreader, No. 072.
Canton, Planter, No. 25.
Canton, Lister, No. 35.
Case, Short Bagger, No. 35.
Case, Thresher, No. 45.

Champion, Binder (New), K396, Lower Reel Drive, No. 72; K397, Upper Reel Drive, No. 72; K447, Binder Reel Drive, No. 72; K461, Elevator Drive, No. 72; K502, Main (W45), No. 72; Elevator, No. 45.
Champion, Upper Reel, No. 45.
Champion, Lower Reel, No. 45.
Champion, Header Reel, No. 45.
Champion, Broadcast Seeder, No. 34.
Champion, Harv. (Drive 1895), No. 45; Drive up to 1890, No. 55; Main Drive, No. 72.
Champion, Harv. and Binder, S93; Reel, S92; Reel, S83; Packer Shaft Drive, S89; Elevator Chain, S97; Reel, S99; Reel, W46½; Main Drive, S91; Elevator, T51; Reel, T57; Drive, W46; Main Drive, No. 72.
Champion, New Elevator, No. 55.
Champion, Improved Elevator, No. 55.
Champion, Hay Tedders, Nos. 55, 62.

Clean Sweep, Hay Loader, No. 45.
Climax, Broadcast Seeder, No. 34.
Clover Leaf, Manure Spreader (Drive), No. 72½; other numbers, 55, 42, 072.
Clover Leaf, Manure Spreader, No. 072.

Dain, Hay Loader, O. S. Drive, No. 055.
Dain, Hay Loader, N. S. Drive, No. 55.
Dain, Tedder, No. 45.

Deering, Binder and Corn Harv., Main Drive, H630.
Deering, Corn Harv., Inner Gatherer, 1895—since; Elevator, 1897—since; Outer Gatherer, 1897—since! No. 55.
Deering, Corn Harv., Elevator, 1896—since! Nos. 45, 55.
Deering, Harv., No. 55.
Deering, Harv. and Corn Harv., Main Drive, 1897-00; No. 76½.
Deering, Harv., Main Drive, 1892 and since; No. 72.
Deering, Harv., Rear Drive, Elevator Pony Elevator, Elevator Ideal, 1898; No. 45.
Deering, Corn Picker, Nos. 32, 55, 62.
Deering, Hay Tedder, Nos. 55, 62.
Deering, Shredder, Nos. 45, 55, 62, 072.
Deering, Reapers, No. 55.

Deere, Corn Planter Nos. 8 and 9, No. 32.
Deere, Lister, No. 25.
Deere, Grain Elevator, No. 55.
Deere, Upper Reel, No. 42.
Deere, Lower Reel, No. 42.
Deere, Hay Loader, Nos. 55, 65.
Deere, Hay Loader (Rattler), No. 45.
Deere, Hay Loader (Elevator), No. 45.
Deere, Drill, No. 32.
Dempster, Drill, No. 32.

Easy, Loader Spreader, No. 72½.
Emerson, Low Down Spreader, Main Drive, No. 2 (Riv. pintle) Beater, No. 55.
Empire, End Gate Seeder, No. 34.
Empire, Harv. and Binder Elevator, No. 45, Reel; No. 36½, Rear Drive; No. 45, Main Drive; No. 72½.

Enterprise, Sandwich Sheller, Cob Carrier, 2 Hole Drive, Nos. 34, 42.
Enterprise, Sandwich Sheller, Feeder, No. 45.
Esterly, Binder, Elevator Harv., Rear Drive and Reel, No. 45.
Esterly, Harv., Main Drive, No. 76½.

Farmer's Friend, Grain Drill, No. 34.
Freeman, Ensilage Cutter, Nos. 34, 42, 48.
Fuller and Johnson, Seeder, No. 34.

Gaar-Scott, Stacker, Nos. 35, 45, 55.
Galloway, Spreader, Drive, No. 55.
Gray, End Gate Seeder, No. 34.
Great Western, Spreader, Drive, No. 062.
Great Western, Spreader, return, No. 52.

Hardie, Power Sprayer, No. 32.
Hart, Grain Weigher, No. 45.
Harvester, Queen Header and Binder, No. 42.
Harvester King, Header, Elevator, 2732, 1895-98; Chain under Binder, 2733; Reel, 2734; Reel, 2735; Platform, 2736; No. 42.
Hawkeye, Hay Loader, Nos. 45, 55.
Hayes, Corn Drill and Planter, No. 25.
Herschel, End Gate Seeder, No. 34.

Hocking Valley, Hay Loader, No. 45.
Hocking Valley, Hand Sheller, No. 33.
Hodges, Header Reel, No. 42.
Hoosier, Broadcast Seeder, No. 33.
Hoosier, Grain Drill, Seeder, No. 25; Feed, No. 32; Drive, No. 51.
Huber, Separator Grain Elevator, No. 45.

Independent, Binder, Drive, No. H567; Elev., No. 45; Head, No. 62.
International, Corn Planters, No. 32.
International, Feed Grinders, No. 42.
International, Grain Drills, No. 32.

Staple Sizes of Chain—Continued

The purpose of this page is for general information only. Below we give a list of the sizes of chain for machines that are in general use and for which there is considerable demand:

International Harv. Co., Manure Spreader, Low Down, Nos. 56, 62.
International Harv. Co., Manure Spreader, Nos. 55, 62, 072.
International, Ensilage Cutters, Nos. 063, 55.
International, Manure Spreader, 20th Century, Nos. 32, 45, 55, 57, 62, 1083K.
International, Motor Baler, No. 72½.
Iron Age, Potato Digger, O. S., No. 51, Steel.
Iron Age, Potato Digger, 1915, No. 51, Mall.

Janesville, Lister, No. 32.
Janesville, Junior Seeder, No. 34.
Janey, Corn Sheller, No. 50.
Janey, Corn Shredder, No. 50.

Johnston, Easy Spreader (Drive), No. 72½.
Johnston, Tedder (Drive), No. 62.
Johnston, Mower, No. 9 (Drive); No. 54, Steel.
Johnston, Corn Binder (Plat and Drive), No. 55.
Johnston, Bonnie Binder, Tier, No. 45; Drive, No. 072½; Elev., No. 78; Steel, Long Reel, No. 42; Short Reel, No. 44; Steel.
Johnston, Continental Binders, Rear Elev., No. 50; Packer, No. 50; Open Elev., L. H., No. 42; Self Feed, No. 45.
Johnston, Manure Spreaders, Nos. 45, 62.

Joliet, 4-Hole Sheller, Cob Carrier, No. 42.
Joliet, 4-Hole Sheller, Cob Rake, No. 34.
Joliet, Ear Corn Carrier, Sheller Feeder, No. 55.

Kemp, Spreader, O. S., No. 62; Apron, Nos. 32, 57.
Kemp, Spreader, 20th Century, Nos. 62, 57, 55, 45.
Kentucky, Wheat Drill, Nos. 25, 32, 34, 51.

Keystone, Corn Drill, No. 25.
Keystone, Feed Chain, No. 55.
Keystone, Force Feed Seeder, No. 34.
Keystone, Grain Binder, Nos. 55, 072.
Keystone, Hay Loader, No. 62.
Keystone, Husker, No. 072.
Keystone, Shellers, Nos. 25, 33, 34, 42, 52, 55, 057, 62, 72.
Keystone, 11 ft. Seeder, No. 42.
Keystone, Hand Sheller, No. 33.
Kingman, Lister, No. 32.
Kingman, Planter, No. 32.

Litchfield, Spreader (Main Drive), No. 66, Steel.
Litchfield, Spreader, Beater, No. 55, Steel.
Leader, Double Throw, End Gate Seeder, No. 34.

Marseilles, Cob Stacker, No. 34.
Marseilles, Drive Sheller (O. S.), No. 45.
Marseilles, Drive Sheller (N. S.), 4-Hole, No. 55.
Marseilles, Old Feeder, No. 45.
Marseilles, New Feeder, No. 55.
Marseilles, Hay Loader, No. 65.
Massey-Harris, Main Drive, No. 72½.
Massey-Harris, Binder Drive, No. 52.
Massey-Harris, Elevator, No. 52.
McCormick, Packer Drive, No. 42.
McCormick, Chain Drive, Corn Harvester; Main Chain, C420, C421, H529; No. 55.
McCormick, Corn Binder, No. 2-A.
McCormick, Corn Husker and Shredder, Nos. 45, 58, 55, 72½.
McCormick, Corn Pickers, Nos. 45, 55, 62.
McCormick, F. P. Grinder, No. 25.
McCormick, Harv., Reel, No. 33.
McCormick, Upper Reel, No. 55.
McCormick, Lower Reel, No. 55.
McCormick, Harv., Rear Drive, R. H. Cut; No. 42.
McCormick, Main Chain, No. H567.
McCormick, Binder Drive Chains (late machines), Steel, No. 72½.
McCormick, Harv. and Binder, H147½; No. 55.
McCormick, Harv. and Binder Elevator, H144; Raising, H443, H528; Rear Drive; No. 45.
McCormick, Harv. and Binder, T482; No. 58.
McCormick, Hay Tedders, No. 62.
McCormick, New Open Elevator, R. H., Elev., V331; Reel, V332; Reel, V323; 1894 to 1898; No. 42.
McCormick, Improved Elevator, No. 55.

Milwaukee, Chain Mower, No. 4; 1887-94; Nos. 52, 52½.
Milwaukee Corn Binder, Nos. 55, 7, Spec.
Milwaukee, Corn Husker, No. 35.
Milwaukee, Grain Binders, No. 72½.
Milwaukee, Jr. Harv. and Binder, No. 10, Drive; No. 10, Reel; No. 10, 1889-97; No. 42; No. 10, H. & B., S331, 1889-97; No. 10, H. & B., S332, 1889-97; No. 10, H. & B., S333, 1889-97; No. 10, H. & B., S334, 1889-97; Elev. Drive, No. 42. Reel Jack, 1889-90, No. 45.

Milwaukee, No. 12, Upper Reel, No. 42.
Milwaukee, No. 12, Lower Reel, No. 42.
Milwaukee, Mower Drive, 1892-93, No. 4, 1887 to 94; No. 52.
Milwaukee, Mower Drive, No. 4, 1887-94; No. 52.
Milwaukee, Binder, No. 52 (Hvy.).
Milwaukee, Binder Drive, No. 052.

Minneapolis, Chief Thresher Grain and Elevator Rakes, No. 45.
Minneapolis, Feeder Carrier, No. 62.
Minneapolis, Harv. and Binder Reel, No. 42.
Minneapolis, Harv. and Binder Elevator, No. 45.
Minneapolis, Harv. and Binder, No. 55.
Moline, Spreader, Drive, No. 62.
Moline, Lister and Corn Planter, No. 25.

National, Spreader (Drive), No. 62 (Return) No. 57.
New Idea, Spreader (Drive), No. H4 (Rvtd) (Cyl.), No. 52½ (Con.), No. 77.
Nisco, Manure Spreader, Upper cylinder and scatterer, No. 52½ (Hvy.).
Nisco, Manure Spreader (Apron), No. 77.
Nisco, Manure Spreader, Drive Chain, No. H4.

Ohio, Ensilage Cutter, Drive, No. 72½; Carrier, No. 65.
Ohio, Potato Digger, No. 45, Steel (O. S.), No. 62½.

Osborne, Binder, No. 42.
Osborne, Columbia Binder, 1900-05, No. 072.
Osborne, Columbia, H. & B. L. H. Drive, No. 76½.
Osborne, Columbia, H. & B., Long Reel, Short Reel, Elevator, No. 42.
Osborne, Columbia, H. & B. L. Binder, No. 52.
Osborne, Grain Binder, No. 50.
Osborne, Drive Chain, No. 072.
Osborne, Harv., Main Drive, 1892-94, No. 76½.
Osborne, Harv., Reel, Rear Drive, No. 45.
Osborne, Harv. and Binder No. 0, R. H. Jr., 1887-91, No. 11, 1887-91, No. 45.

Staple Sizes of Chain—Continued

The purpose of this page is for general information only. Below we give a list of the sizes of chain for machines that are in general use and for which there is considerable demand:

Osborne, 02, Elevator Lower R. and L., No. 47.
Osborne, 02, Elevator Upper Right, No. 47.
Osborne, 02, Elevator Upper Left, No. 47.
Osborne, 1901, Elevator Upper Right, No. 55.
Osborne, 1901, Elevator Lower Right, No. 55.
Osborne, 1901, Elevator Lower Left, No. 55.
Osborne, 1901, Elevator Left, No. 55.
Osborne, 97 to 00, Elevator Lower R. and L., No. 45.
Osborne, 97 to 00, Elevator Upper Left, No. 45.
Osborne, 97 to 00, Elevator Upper Right, No. 45.
Osborne, 95 to 96, Elevator R. and L., No. 34.
Osborne, Hay Tedder, No. 52.
Osborne, Reaper, No. 52.

Ottawa, Sheller, Drive, No. 34.
Ottawa, Sheller, No. 42.
Ottawa, "C" Corn Sheller, No. 55.
Ottawa, Elevator for Shelled Corn, No. 55.
Ottawa, Cob Carrier, Ear Corn Carrier, "D" Corn Sheller, No. 42.
Ottawa, Corn Husker, No. 50.

Parlin & Orendorff, Grain Elevator, No. 62.
Parson, Self Feeder Carrier, No. 55, Band Cutter, No. 55.
Perfection, Thresher Elevator, No. 45.
Perfection, Weigher Tally Box, No. 25.
Perfection, Weigher, No. 45.

Plano, H. & B. Adj. 1891-94, L. S. Adj., Jones Lever, 1895, No. 25.
Plano, H. & B. Adj. 1895-6, Jones Lever, Nos. 1 and 2, L. S., 1895-Since, No. 32.
Plano, H. & B. Drive Chain 1893, L. S. & J. S., Nos. 1 and 2, No. 072.
Plano, H. & B. Jones Hdr. 1894-96, No. 072.
Plano, H. & B. Drive Chain 1888-92, A. S. & L. S., No. 62.
Plano, H. & B. Steel Hdr. 1892-96, Jones Hdr., 1892-96, No. 42.

Plano, H. & B. Elevator Chain 1888-91, Jones Hdr. & L. S., 1892-96, No. 45.
Plano, 8 ft. only Elevator, No. 55.
Plano, H. & B. Raising Chain, 1888-92, Drive, 1890-95, 4½, 5 & 6 ft., No. 52.
Plano, Headers, Nos. 42, 072.
Plano, Mowers, Nos. 52, 063.
Plano, Shredder, Nos. 42, 45, 62, 072.
Plano, Tilting H. & B., No. 25.

Randolph, Header, No. 42.
Reeves, Thresher, No. 2212, No. 62.
Reeves, Thresher, No. 2205, No. 45.
Reeves, Thresher, No. 2210, No. 35.
Rock Island, Lister, No. 25.
Rock Island, Hay Loader, No. 055.

Rude Bros., No. 2, Manure Spreaders, No. 72, Apron, No. 66.
Rude Bros., Nos. 6 and 7, Manure Spreaders, No. 76½.

Sandwich, Binder Drive, No. 45.
Sandwich, Binder Main Drive, No. 76½.
Sandwich, Sheller, O. S. No. 47—N. S. No. 057; Cob Stacker, No. 37; New Dustless Stacker, No. 45.
Sandwich Hay Loader No. 45.
Sattley, Corn Planter, No. 25.
Smalley, Ensilage Cutter, Nos. 9 and 10, No. 42.
Smalley, Ensilage Cutter, Nos. 12, 14, 16 and 18, No. 52.
Smalley, Ensilage Cutter, Nos. 20 and 26.

Star, End Gate Seeder, No. 34.
Sterling, Hay Loader (Rattle), No. 42.
Sterling, Force Feed Seeder, No. 34.
Stowe, End Gate Seeder, No. 34.
Strowbridge, Broadcast Seeder, No. 34.
Success, Manure Spreader, No. 57.
Success, Manure Spreader, No. 2 (K303).
Sure Feed, End Gate Seeder, No. 34.

Thomas, Hay Loader, No. 65.
Tiger, Disc Harrow and Seeder, No. 35.
Tiger, Separator, Bagger Chain, No. 35.
Tiger, Separator Elevator Chain, No. 45.
Tiger, Drill, No. 42.
Tiger, Seeder, No. 42.
Triumph, (B463) and (B464) Seeders, No. 42.
Triumph, Cob Sheller, No. 34.

Van Brunt, Drill, No. 34.
Victory, Self Feeder, No. 45.
Victory, Thresher, Feeder, No. 55.

Washington, Weigher, No. 45.
Western, Sheller, No. 55.
Walter A. Wood, Fearless Manure Spreader, No. 1, No. 72½.
Walter A. Wood, Fearless Manure Spreader, Nos. 2 and 3, No. 78.
Walter A. Wood, Harvesters, No. 55.
Walter A. Wood, Tedder, 6 or 7 Fork, No. 52.

Wood, Binder Drive, Front, No. 4997, 1890-91; Rear, No. 4998, 1890-91; Front and Rear Chains, No. 5700, 1892-Since, No. 55.
Wood, Minneapolis, Binder Drive (K1201), 1888-Since, No. 55.
Wood, Minneapolis, Drive, Rear, No. 45.
Wood, Minneapolis, Harv. Reel, K1662, 1899-1904; Upright Reel, K1662, 1888-1894; Elevator, K1664, 1888-1894, No. 42.
Wood, Minneapolis, Main Drive, No. 5671, 1892-Since, No. 76½.

Wood, No. 9 and New Century Harv. and Bdr., Driving Chain and Rear Elev., Driving Chain, No. 55.
Wood, No. 9, New Century and Open Rear Harv. Drive, No. 76½.
Wood, No. 9, New Century and Open Rear Harvesters (Upper Elev. Drive), No. 34.
Wood, Single Apron Harvester, 1892; Elevator, No. 4899, 1888 only; Drive Rake, No. 5098, 1890-92; Drive Rake, No. 5097, 1890-91; Apron Drives, No. 5630, 1892 only; Upright Elevator Roller Drive, No. 5631, 1892 only; Apron Drive No. 5765, 1893; Upright Elevator Roller Drive, No. 5766, 1893-Since, No. 55.

If unable to determine the number of the chain wanted, send us a sample link and we will try to match it.

Mower and Binder Repairs

All of these repairs are of the well-known Herschel make. Every piece is absolutely guaranteed as to fit, workmanship and material. Anything found defective will be cheerfully replaced. Our stock of these goods is one of the largest in the Southwest. Prompt shipments made of practically all mail orders.

MOWER SMOOTH KNIVES

In ordering Sickles or Knives, always give the Name of the Machine, the Number of Knife Head, how many Cutting Sections and their size.

4½-foot. . . . . Each, $3.80
5 -foot. . . . . Each, $4.10 7-foot. . . . . Each, $4.90
6 -foot. . . . . Each, $4.40 8-foot. . . . . Each, $5.30
Above prices are for Knives with malleable heads. For steel head knives add. . . . . Each, $0.40

Average weights—4½-ft. Knife, 7 lbs.; 5-ft. Knife, 8 lbs.; 6-ft. Knife, 9½ lbs.; 7-ft. Knife, 10½ lbs.; 8-ft. Knife, 11½ lbs.

Will Fit Accurately the Machines for Which They Are Intended.

No.	NAME AND DESCRIPTION.	No. of Head	No. of Sections	Size of Sections
22A	Acme, New Hodges Mower, 1899-Since	T6	18	3x3 5/16
22B	Acme, New Hodges Mower, 1899-Since	T6	20	3x3 5/16
22C	Acme, New Hodges Mower, 1899-Since	T6	24	3x3 5/16
22D	Acme, New Hodges Mower, 1899 Since	T6	28	3x3 5/16
31C	Adriance, Mower, size "H" and Nos. 7, 8, 9, 10 and 12, 1892-Since.	557F	20	3x3⅛
31D	Adriance, Mower, size "H" and Nos. 7, 8, 9, 10 and 12, 1892-Since.	557F	24	3x3⅛
	American Grass Twine, (see Minnie).			
48B	Buckeye, Akron, Light Mower, Adj. Pit., 1876-91 (Steel)	301 or 864	18	3x3 5/16
48C	Buckeye, Akron, Light Mower, Adj. Pit., 1876-91 (Steel)	301 or 864	20	3x3 5/16
49C	Buckeye, Akron, New Mower, Adj. Pit., 1892-94 (Steel	864	18	3x3⅜LP
49D	Buckeye, Akron, New Mower, Adj. Pit., 1892-94 (Steel	864	20	3x3⅜LP
49E	Buckeye, Akron, New Mower, Adj. Pit., 1892-94 (Steel	864	24	3x3⅜LP
51B	Buckeye, Akron, Light Mower, 1895-01 (Steel)	864	18	3x3⅜HP
51C	Buckeye, Akron, Light Mower, 1895-01 (Steel)	864	20	3x3⅜HP
51D	Buckeye, Akron, Light Mower, 1895-01 (Steel)	864	24	3x3⅜HP
	Buckeye, Adriance (see Adriance).			
67A	Crown, Janesville or Thomas, 1898 and since, O. H. Rivet	6	18	3x3¼
67B	Crown, Janesville or Thomas, 1898 and since, O. H. Rivet	6	20	3x3¼
67C	Crown, Janesville or Thomas, 1898 and since, O. H. Rivet	6	24	3x3¼
73	Champion, Draw, Cut and Haymaker Mowers, 1895-Since	A415	18	3x3 5/16
73A	Champion, Draw, Cut and Haymaker Mower, 1895-Since	A415	20	3x3 5/16
73B	Champion, Draw, Cut and Haymaker Mower, 1895-Since	A415	24	3x3 5/16
73C	Champion, Draw, Cut and Haymaker Mowers, 1895-Since	A415	28	3x3 5/16
84A	Champion, New and Big Draw Cut Mowers, 1905-Since; Vertical Lift, 1904-Since	A870	18	3x3 5/16
84B	Champion, New and Big Draw Cut Mowers, 1905-Since; Vertical Lift, 1904-Since	A870	20	3x3 5/16
84C	Champion, New and Big Draw Cut Mowers, 1905-Since; Vertical Lift, 1904-Since	A870	24	3x3 5/16
84D	Champion, New and Big Draw Cut Mowers, 1905-Since; Vertical Lift, 1904-Since	A870	28	3x3 5/16
85	Champion, Improved and Improved Vertical Mowers, 1909-Since, Steel.	A5792	18	3x3 5/16
85A	Champion, Improved and Improved Vertical Mowers, 1909-Since, Steel.	A5792	20	3x3 5/16
85B	Champion, Improved and Improved Vertical Mowers, 1909-Since, Steel.	A5792	24	3x3 5/16
85C	Champion, Improved and Improved Vertical Mowers, 1909-Since, Steel.	A5792	28	3x3 5/16
	Columbia (see Osborne).			
	Crown (see Thomas).			
92	Champion, Big Improved, Vertical Lift and Improved Mower, California Wood Pitman, 1912-Since	A1253	18	3x3¼
92A	Champion, Big Improved, Vertical Lift and Improved Mower, California Wood Pitman, 1912-Since	A1253	20	3x3¼
92B	Champion, Big Improved, Vertical Lift and Improved Mower, California Wood Pitman, 1912-Since	A1253	24	3x3¼
	A1253 Knife Head will work for A1206, used 1910 and 1911.			
	Dain (see Deere).			
99	Deere, 1895-Since, Vertical and Plain Lift (Z5571 Section).	Z45	18	3x3 5/16
99A	Deere, 1895-Since, Vertical and Plain Lift (Z5571 Section).	Z45	20	3x3 5/16
99B	Deere, 1895-Since, Vertical and Plain Lift (Z5571 Section).	Z45	24	3x3 5/16
99C	Deere, 1895-Since, Vertical and Plain Lift (Z5571 Section).	Z45	28	3x3 5/16
	Knives with head No. Z45 interchange with Z45A and Z45E.			
102A	Deere, Vert. and Plain Lift Mowers, 1922-Since (Z5571 smo. sec.).	Z502	18	3x3 5/16
102B	Deere, Vert. and Plain Lift Mowers, 1922-Since (Z5571 smo. sec.).	Z502	20	3x3 5/16
102C	Deere, Vert. and Plain Lift Mowers, 1922-Since (Z5571 smo. sec.).	Z502	24	3x3 5/16
111A	Deering, Ideal Mower, 1895-04, Steel Head	F123	18	3x3 7/16
111C	Deering, Ideal Mower, 1895-04, Steel Head	F123	20	3x3 7/16
111D	Deering, Ideal Giant Mower, 1895-04, Steel head	F123	24	3x3 7/16
111E	Deering, Ideal Giant Mower, 1895-04, Steel Head	F123	28	3x3 7/16
121B	Deering, New Ideal and New Ideal Vertical Mowers, 1905-Since; Ideal and Ideal Giant, 1898-05; New Ideal Giant, 1906-Since	D463	18	3x3¼
121C	Deering, New Ideal and New Ideal Vertical Mowers, 1905-Since; Ideal and Ideal Giant, 1898-05; New Ideal Giant, 1906-Since	D463	20	3x3¼
121D	Deering, New Ideal and New Ideal Vertical Mowers, 1905-Since; Ideal and Ideal Giant, 1898-05; New Ideal Giant, 1906-Since	D463	24	3x3¼
121E	Deering, New Ideal and New Ideal Vertical Mowers 1905-Since; Ideal and Ideal Giant, 1898-05; New Ideal Giant, 1906-Since	D463	28	3x3¼

MOWER SMOOTH KNIVES—Continued

For Price, See Previous Page

No.	NAME AND DESCRIPTION.	No. of Head	No. of Sections	Size of Sections
129	Deering, New Ideal Giant and Ideal "B" Mowers, 1909-Since	D920	24	3x3¼
129A	Deering, New Ideal Giant and Ideal "B" Mowers, 1909-Since	D920	28	3x3¼
	Deering, Ideal Mower, 1909-11; New Ideal 1909-12 New Ideal B, 1909-Since	DA920	18	3x3¼
	Deering, Ideal Mower, 1909-11; New Ideal 1909-12 New Ideal B, 1909-Since	DA920	20	3x3¼
	Deering, Ideal Mower, 1909-11; New Ideal 1909-12 New Ideal B, 1909-Since	DA920	24	3x3¼
145B	Emerson, Standard Mowers, 1899-00	(Z94) or M195	28	3x3¼
145C	Emerson, Standard Mowers, 1899-00	(Z94) or M195	18	3x3⅛
145D	Emerson, Standard Mowers, 1899-00	(Z94) or M195	20	3x3⅛
145E	Emerson, Standard Mowers, 1899-00	(Z94) or M195	24	3x3⅛
145F	Emerson, Standard Mowers, 1899-00	(Z94) or M195	28	3x3⅛
150A	Emerson, Standard Mowers, 1900-Since	(Z94) or M195	32	3x3⅛
150B	Emerson, Standard Mowers, 1900-Since	M203	18	3x3⅛
150C	Emerson, Standard Mowers, 1900-Since	M203	20	3x3⅛
151	Emerson, Standard Mowers, 1900-Since	M203	24	3x3⅛
151A	Emerson, Standard Mowers, 1900-Since	M204	28	3x3⅛
152A	Emerson, Standard Mowers, 1900-Since	M204	32	3x3⅛
152B	Emerson, Standard Mowers, 1900-Since	M224	18	3x3⅛
152C	Emerson, Standard Mowers, 1900-Since	M224	20	3x3⅛
152D	Emerson, Standard Mowers, 1900-Since	M224	24	3x3⅛
152E	Emerson, Standard Mowers, 1900-Since	M224	28	3x3⅛
160	Independent, Mower, 1910	M224	32	3x3⅛
160A	Independent, Mower, 1910	M51	18	3x3⅜
160B	Independent, Mower, 1910	M51	20	3x3⅜
160C	Independent, Mower, 1910	M51	24	3x3⅜
171B	Johnston, No. 6 Continental, No. 8 Globe, No. 9 Chain Drive and Mayflower Mowers, 1896-Since; No. 10 Gear Drive, 1901-Since	M51	28	3x3⅜
171C	Johnston, No. 6 Continental, No. 8 Globe, No. 9 Chain Drive and Mayflower Mowers, 1896-Since; No. 10 Gear Drive, 1901-Since	919	18	3x3⅜
171D	Johnston, No. 6 Continental, No. 8 Globe, No. 9 Chain Drive and Mayflower Mowers, 1896-Since; No. 10 Gear Drive, 1901-Since	919	20	3x3⅜
186	Johnston, New No. 10 High Cut Mower, 1909-Since (O. H. Riv.)	919	24	3x3⅜
186A	Johnston, New No. 10 High Cut Mower, 1909-Since (O. H. Riv.)	2211	20	3x3⅜
186B	Johnston, New No. 10 High Cut Mower, 1909-Since (O. H. Riv.)	2211	24	3x3⅜
	Jones, (See Plano).	2211	28	3x3⅜
191A	Keystone, Milwaukee, Gear Drive Mower, 1906-Since	A184	20	3x3⅛
191B	Keystone, Milwaukee, Gear Drive Mower, 1906-Since	A184	24	3x3⅛
213	McCormick, Mower, New 4, Vertical Lift, '96-Since	M139	18	3x3¼
213A	McCormick, Mower, New 4, Vertical Lift, '96-Since	M139	20	3x3¼
213B	McCormick, Mower, New 4, Vertical Lift, '96-Since	M139	24	3x3¼
213C	McCormick, Mower, New 4, Vertical Lift, '96-Since	M139	28	3x3¼
220A	McCormick, No. 4 Mower 1888-97; New 4 and Vertical, 1896-Since	M139	18	3x3⅛
220B	McCormick, No. 4 and Big 4 Mowers, 1888-97; New 4 and Vertical, 1896-Since; New Big 4, 1898-Since	M139	20	3x3⅛
220C	McCormick, Big 4 Mower, 1889-97; New Big 4 1898-Since	M139	24	3x3⅛
220D	McCormick, Big 4 Mower, 1889-97; New Big 4, 1898-Since	M139	28	3x3⅛
221A	McCormick, New 4 and Vertical Mowers, 1896-Since	M139	18	3x3⅛
221B	McCormick, New 4 and Vertical Mowers, 1896-Since; New Big 4, 1898-Since	M139	20	3x3⅛
221C	McCormick, Big 4 Mower, 1889-97; New Big 4, 1898-Since	M139	24	3x3⅛
221D	McCormick, Big 4 Mower, 1889-97; New Big 4, 1898-Since	M139	28	3x3⅛
228A	McCormick, Weed Mower, New 4, Vertical and New Big 4, 1896-Since (Heavy Section)	M999	14	3x3⅛
228B	McCormick, Weed Mower, New 4, Vertical and New Big 4, 1896-Since (Heavy Section)	M999	16	3x3⅛
228C	McCormick, Weed Mower, New 4, Vertical and New Big 4, 1898-Since (Heavy Section)	M999	18	3x3⅛
228D	McCormick, Weed Mower, New 4, Vertical and New Big 4, 1896-Since (Heavy Section)	M999	20	3x3⅛
229A	McCormick, No. 6 and No. 6 Vertical, 1915	MA139	18	3x3¼
229B	McCormick, No. 6 and No. 6 Vertical, 1915	MA139	20	3x3¼
229C	McCormick, No. 6 and No. 6 Vertical, 1915	MA139	24	3x3¼
229D	McCormick, No. 6 and No. 6 Vertical, 1915	MA139	28	3x3¼
230A	Massey Harris, Mower, No. 15	M1708	20	3x3¼
230C	Massey Harris, Mower, No. 16	M1708	24	3x3¼
230E	Massey Harris, Mower, No. 16	M1708	28	3x3¼
247A	Minnie, Mower, 1902-Since	M1081	20	3x3¼
247B	Minnie, Mower, 1902-Since	M1081	24	3x3¼
250	Milwaukee, Chain Drive Reaper, 1900-Since	PG6	20	3x3⅛
253	Milwaukee, No. 6, Chain Drive Mower, 1892-Since	PG6	24	3x3⅛
253A	Milwaukee, No. 6, Chain Drive Mower, 1892-Since	PG6	28	3x3⅛
253C	Milwaukee, No. 6, Chain Drive Mower, 1892-Since; No. 5, C. D. Mower, 1894-Since	PG6	20	3x3⅛
253D	Milwaukee, No. 6, Chain Drive Mower, 1892-Since; No. 5. C. D. Mower, 1894-Since	PG6	18	3x3⅛
	Milwaukee, Gear Drive, see Keystone.			
307B	Osborne, No. 4, Mower, 1885-92, (Replaces K50)	K212	20	3x3LP
307C	Osborne, Big 4, Mower, 1885-92, (Replaces K50)	K212	24	3x3LP
308B	Osborne, Big 4 and No. 6, Mower, 1893	K212	20	3x3HP
308C	Osborne, Big 4 and No. 6, Mower, 1893	K212	24	3x3HP
311A	Osborne, Columbia Mower, "C and D," 1896-01	K284	20	3x3HP
312	Osborne, Columbia Mower, "D," 1896-01	K284	24	3x3HP
317	Osborne, Columbia Mower, "C and D," 1902-05	K520	18	3x3HP
317A	Osborne, Columbia Mower, "C and D," 1902-05	K520	20	3x3HP
318	Osborne, Columbia Mower, "D," 1902-05	K520	24	3x3HP

MOWER SMOOTH KNIVES—Continued

For Price, See Page 696.

No.	NAME AND DESCRIPTION.	No. of Head	No. of Sections	Size of Sections
323	Osborne, Columbia Mower, "C," 1902-05	K512	18	3x3⅞
324	Osborne, Columbia Mower, "C and D," 1902-05	K512	20	3x3⅞
325	Osborne, Columbia Mower, "D," 1902-05	K512	24	3x3⅞
330	Osborne, No. 2, Mower, 1905-Since	K774	18	3x3⅞
331	Osborne, Nos. 2 and 3, Mower, 1905-Since	K774	20	3x3⅞
332	Osborne, No. 3 Mower, 1905-Since	K774	24	3x3⅞
332A	Osborne, No. 3, Mower, 1905-Since	K774	28	3x3⅞
353A	Plano, Jones Vertical and Big Vertical Mowers, 1901-03	J429	18	3x3⅛
353B	Plano, Jones Vertical and Big Vertical Mowers, 1901-03	J429	20	3x3⅛
353C	Plano, Jones Vertical and Big Vertical Mowers, 1901-03	J429	24	3x3⅛
362B	Plano, Jones Chain Mower, 1895-97 (Thin Bar)	J94	18	3x3⅛
362C	Plano, Jones Chain Mower, 1895-97 (Thin Bar)	J94	20	3x3⅛
362D	Plano, Jones Chain, Mower, 1895-97 (Thin Bar)	J94	24	3x3⅛
365	Plano, Jones Vertical, Big Vertical Mowers, 1903-Since; Plain, Big Plain, 1907-Since.	J429	18	3x3¼
365A	Plano, Jones Vertical, Big Vertical Mowers, 1903-Since; Plain, Big Plain, 1907-Since.	J429	20	3x3¼
365B	Plano, Jones Big Vertical, 1903-Since; Big Plain, 1907-Since	J429	24	3x3¼
365C	Plano, Jones Big Vertical, 1903-Since; Big Plain, 1907-Since	J429	28	3x3¼
	Standard, (See Emerson.)			
429C	Thomas, (Crown), New Mower, 1898-Since	6	18	3x3¼
429D	Thomas, (Crown, New Mower, 1898-Since	6	20	3x3¼
429E	Thomas, (Crown), New Mower, 1898-Since	6	24	3x3¼
429F	Thomas, (Crown), New Mower, 1898-Since	6	28	3x3¼
454A	Wood, Tubular Steel Mower, 1892-Since	1810	18	3x2⅝
454B	Wood, Tubular Steel Mower, 1892-Since	1810	20	3x2⅝
454C	Wood, Tubular Steel Mower, 1892-Since	1810	24	3x2⅝
455A	Wood, Tubular Steel Mower (with Guard A), 1892-Since; Enclosed Gear, 1891-Since.	1680	18	3x3⅛
455B	Wood, Tubular Steel Mower (with Guard A), 1892-Since; Giant Mower (with Guard A), 1901-Since; Enclosed Gear, 1891-Since	1680	20	3x3⅛
455C	Wood, Tubular Steel Mower (with Guard A), 1892-Since; Giant Mower (with Guard A), 1901-Since; Enclosed Gear, 1891-Since	1680	24	3x3⅛
468B	Wood, Tubular Steel Mower, 1903-Since (with Guard 2355)	2479	20	3x3⅛
468C	Wood, Tubular Steel Mower, 1903-Since (with Guard 2355)	2479	24	3x3⅛
468D	Wood, Tubular Steel Mower, 1903-Since (with Guard 2355)	2479	28	3x3⅛
471A	Wood, Admiral Mower, 1907-Since	2862	18	3x3⅛
472	Wood, Admiral Mower, 1907-Since; Admiral Giant, 1908-Since	2862	20	3x3⅛
472A	Wood, Admiral Giant Mower, 1908-Since	2862	24	3x3⅛
472B	Wood, Admiral Giant Mower, 1908-Since	2862	28	3x3⅛
472½	Wood, Vertical No. 2, 1915-Since	K366	18	3x3⅛
472½	Wood, Vertical No. 2, 1915-Since	K366	20	3x3⅛
472½	Wood, Vertical No. 2, 1915-Since	K366	24	3x3⅛

WEED KNIVES FOR MOWERS

We can furnish these patterns with rough sections. Will fit accurately the Machines for which they are intended.

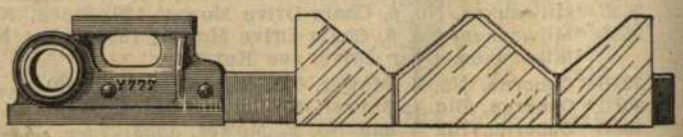
No.	NAME.	No. of Head	No. of Sections	Size of Sections
R 22B	Acme	T6X	20	3x3⅞
R 22C	Acme	T6X	24	3x3⅞
R 31C	Adriance	557F	20	3x3⅛
R 31D	Adriance	557F	24	3x3⅛
R 51C	Buckeye	864	20	3x3⅜HP
R 51D	Buckeye	864	24	3x3⅜HP
R 73A	Champion	A415X	20	3x3⅞
R 73B	Champion	A415X	24	3x3⅞
	Crown (see Thomas)			
	Dain (see Deere)			
R 99A	Deere	Z45E	20	3x3⅞
R 99B	Deere	Z45E	24	3x3⅞
	Deere	Z45A	20	3x3⅞
	Deere	Z45A	24	3x3⅞
	Deering (Steel)	DA920	20	3x3⅞
	Deering (Steel)	DA920	24	3x3⅞
R121C	Deering	D463	20	3x3¼
R121D	Deering	D463	24	3x3¼
R150B	Emerson	M203	20	3x3⅛
R150C	Emerson	M203	24	3x3⅛
R186	Johnston	2211	20	3x3⅜
R186A	Johnston	2211	24	3x3⅜
R191A	Keystone	A184	20	3x3⅞
R191B	Keystone	A184	24	3x3⅞
R220B	McCormick	M139	20	3x3⅞
R220C	McCormick	M139	24	3x3⅞
R228C	McCormick	M999	18	3x3⅞
R228D	McCormick	M999	20	3x3⅞
R228E	McCormick	M999	24	3x3⅞

No.	NAME.	No. of Head	No. of Sections	Size of Sections
R253C	Milwaukee	PG6	20	3x3⅛
R253	Milwaukee	PG6	24	3x3⅛
R311A	Osborne	K284	20	3x3HP
R312	Osborne	K284	24	3x3HP
R353B	Plano	J429	20	3x3⅛
R353C	Plano	J429	24	3x3⅛
	Standard (see Emerson)			
R132	Thomas	6	20	3x3¼
R132A	Thomas	6	24	3x3¼

4½-foot Any Pattern.....Each, $4.20
5 -foot Any Pattern.....Each, $4.50
6 -foot Any Pattern.....Each, $4.80

Above prices are for knives with malleable heads. For steel head knives add $0.40.

CORN HARVESTER KNIVES



Will fit accurately the machines for which they are intended.

No.	NAME AND DESCRIPTION.	Each
1861	Deering (Y777), Ideal Binder, 1904-1906	$2.10
1862	McCormick (C425), 1896-1899	$1.60

BINDER AND HEADER SICKLES

Header Sickles From Factory Only, Peoria, Ill.

5-foot Binder.....Each, $4.10
6-foot Binder.....Each, $4.40
7-foot Binder.....Each, $4.90
8-foot Binder.....Each, $5.30

10-foot Header.....Each, $7.00
12-foot Header.....Each, $8.00
14-foot Header.....Each, $9.00

Average weights—5-ft. Sickle, 6½ lbs.; 6-ft. Sickle, 7½ lbs.; 7-ft. Sickle, 8 lbs.; 8-ft. sickle, 9 lbs.; 10-ft. Sickle, 10 lbs.; 12-ft. Sickle, 11 lbs.; 14-ft. Sickle, 12 lbs.

Will fit accurately the Machines for which they are intended.

No.	NAME AND DESCRIPTION.	No. of Head	No. of Sections	Size of Sections
617A	Acme, Queen Binder, L. H., 1901-Since	V40	24	3x2¼
617B	Acme, Queen Binder, L. H., 1901-Since	V40	28	3x2¼
617C	Acme, Queen Ginder, L. H., 1901-Since	V40	32	3x2¼
619A	Acme, Queen Binder, R. H., 1902-Since	V258	24	3x2¼
619B	Acme, Queen Binder, R. H., 1902-Since	V258	28	3x2¼
631	Adriance, No. 7, L. H.	JA102	24	3x2½
631A	Adriance, No. 7, L. H.	JA102	28	3x2½
631B	Adriance, No. 7, L. H.	JA102	32	3x2½
652A	American Grass Twine (Minnie Harvester), 1901-Since	K1356	24	3⅛x2½
652B	American Grass Twine (Minnie Harvester, 1901-Since	K1356	27	3⅛x2½
695A	Champion, Force Feed Harvester, 1895-Since	1852	25	3x3⅛
695B	Champion, Force Feed Harvester, 1895-Since	1852	28	3x3⅛
695C	Champion, Force Feed Harvester, 1895-Since	1852	33	3x3⅛
697A	Champion, New Champion Harvester, 1904-05	3027	25	3x3
697B	Champion, New Champion Harvester, 1904-05	3027	28	3x3
698A	Champion, New Champion Harvester, 1906-Since	3283	25	3x3
698B	Champion, New Champion Harvester, 1906-Since	3283	28	3x3
698C	Champion, New Champion Harvester, 1906-Since	3283	32	3x3
699A	Champion, Improved Harvester, 1909-Since	2564	24	3x3
699B	Champion. Improved Harvester, 1909-Since	2564	27	3x3
699C	Champion. Improved Harvester, 1909-Since	2564	32	3x3
701A	Champion, New Binder, 1902-05	3027	25	3x3⅛
701B	Champion, New Binder, 1902-05	3027	28	3x3⅛
702A	Champion, New Binder, 1906-09	3283	25	3x3⅛
702B	Champion, New Binder, 1906-09	3283	28	3x3⅛
702C	Champion, New Binder, 1906-09	3283	33	3x3⅛
703A	Champion, Improved Harvester, 1909-Since	2564	24	3x3⅛
703B	Champion, Improved Harvester, 1909-Since	2564	27	3x3⅛
703C	Champion, Improved Harvester, 1909-Since	2564	32	3x3⅛
732	Deere, Light Draft Binder, Z5188, 1910	HZ57	24	3x2⅛
732A	Deere, Light Draft Binder, Z5189, 1910	HZ57	28	3x2⅛
732B	Deere, Light Draft Binder, Z5190, 1910	HZ57	32	3x2⅛
733	Deere, Flax, 1911.	HZ57	24	3x2⅛
733A	Deere, Flax, 1911.	HZ57	28	3x2⅛
733B	Deere, Flax, 1911.	HZ57	32	3x2⅛
733	Deere, Light Draft Binder, 1914-Since	HZ493	24	3x2⅛
733A	Deere, Light Draft Binder, 1914-Since	HZ493	28	3x2⅛
733B	Deere, Light Draft Binder, 1914-Since	HZ493	32	3x2⅛
769A	Deering, Ideal Harvester, 1899-03	H260	23	3⅛x2⅛
769B	Deering, Ideal Harvester, 1899-03	H260	27	3⅛x2⅛
769C	Deering, Ideal Harvester, 1899-03	H260	31	3⅛x2⅛
769BB	Deering, Ideal Harvester, 1898-03 (H877 will work)	H260	23	3⅛x2⅛
769CC	Deering, Ideal Harvester, 1898-03 (H877 will work)	H260	27	3⅛x2⅛
770A	Deering, Junior and Improved Steel Harvester, 1890-00	E449 or E701	23	3⅛x2⅛
770B	Deering, Junior and Improved Steel Harvester, 1890-00	E449 or E701	27	3⅛x2⅛
775A	Deering, Ideal Harvester, 1904-09; New Ideal Harvester, 1908-Since	H877	23	3⅛x2⅛
775B	Deering, Ideal Harvester, 1904-09; New Ideal Harvester, 1908-Since	H877	27	3⅛x2⅛
775C	Deering, Ideal Harvester, 1904-09; New Ideal Harvester, 1908-Since	H877	31	3⅛x2⅛
776A	Deering, Ideal Harvester, 1904-09; New Ideal, 1908-Since	H877	23	3⅛x2⅛
776B	Deering, Ideal Harvester, 1904-09; New Ideal, 1908-Since	H877	27	3⅛x2⅛
801A	Header, Acme King, 1895-Since	1063	47	3x2
801B	Header, Acme King, 1895-Since	1063	55	3x2
804A	Header, Acme, Hodges Coast Ch. Dr., and Home Trade, 1893-06, Steel	A3014	37	4x2⅛
804B	Header, Acme, Hodges Coast Ch. Dr., and Home Trade, 1893-10, Steel	A3014	43	4x2⅛
805	Header, Acme, Hodge Coast, Ch. Dr., 1901-02, Steel	A3014	37	4x2⅞LP
805A	Header, Acme, Hodge Coast, Ch. Dr., 1901-02, Steel	A3014	43	4x2⅞LP
806	Header, Acme, Craver, 1894-05, Steel (377B)	A3014	35	4x2⅛
807	Header, Acme, Craver, 1906-Since, Steel (337B Section)	A3014	35	4x2⅛
807A	Header, Acme, Craver, 1907-Since, Steel (337D Section)	A3014	35	4x2⅛
	Header, Acme, Craver, 06-12	A3014A	37	4x2⅞HP
	Header, Acme, Craver, 06-12	A3014A	43	4x2⅞HP
841	Header, Champion, 1905-06, Steel	J191	36	4x2⅛
842A	Header, Champion, 1908-Since (Bar Csk. Bot)	V2089	36	4x2⅛
842B	Header, Champion, 1908-Since (Bar Csk. Bot.)	V2089	42	4x2⅛
843	Header, Champion, Push, 1905-06, Steel	J361	38	3x2½
843A	Header, Champion, Push, 1905-06, Steel	J361	46	3x2½
862A	Header, Deering, Push, 1902-03	515	44	3⅛x2⅛
862B	Header, Deering, Push, 1902-03	515	52	3⅛x2⅛

BINDER AND HEADER SICKLES—Continued

For Price, See Previous Page

No.	NAME AND DESCRIPTION	No. of Head	No. of Sections	Size of Sections
863A	Header, Deering, Push, 1902-04 (Smooth)	515	44	3⅛x2⅞
864A	Header, Deering, Push, 1904-06	787	44	3⅛x2⅞
864B	Header, Deering, Push, 1904-06	787	52	3⅛x2⅞
865A	Header, Deering, Push, 1904-06 (Smooth)	787	44	3⅛x2⅞
865B	Header, Deering, Push, 1904-06 (Smooth)	787	52	3⅛x2⅞
867A	Header, Deering, Push, 1907-Since	806	33	4⅜x2⅝
867B	Header, Deering, Push, 1907-Since	806	33	4⅜x2⅝
868	Header, Deering No. 2, 1906-Since	846	34	4⅜x2⅝
868A	Header, Deering No. 2, 1907-Since	846	37	4⅜x2⅝
869A	Header, Deering, Push and Push Binder, 1913-Since	923	33	4⅜x2⅝
869B	Header, Deering, Push and Push Binder, 1913-Since	923	39	4⅜x2⅝
942	Header, McCormick, 1900, Steel	J191	36	4x2⅞
942A	Header, McCormick, 1900, Steel	J191	42	4x2⅞
943	Header, McCormick, 1901-Since, Steel	J191	30	4x2⅛
943B	Header, McCormick, 1901-Since, Steel	J191	42	4x2⅛
944	Header, McCormick, Binder, 1902-Since, Steel	J191	38	3x2½
944A	Header, McCormick, Binder, 1902-Since, Steel	J191	46	3x2½
992	Independent, Binder, 1910	N143	23	3⅛x2⅛
992A	Independent, Binder, 1910	N143	27	3⅛x2⅛
992B	Independent, Binder, 1910	N143	31	3⅛x2⅛
1026	Johnston, Bonnie Binder, 1906-Since; Continental, R. H., 1905-Since	L756	25	3x2⅜HP
1028	Johnston, Bonnie Binder, 1900-Since; Continental, R. H., 1900-05-Since	L756	28	3x2⅜HP
1029A	Johnston, Bonnie Binder, 1900-Since; Continental Binder, 1905-Since	L756	24	3x2⅛
1039C	Johnston, Continental, L. H., Binder, 1906-Since	K306	24	3x2⅛HP
1039G	Johnston, Continental, L. H., Binder, 1903-Since	K306	28	3x2⅛HP
1039H	Johnston, Continental, L. H., Binder, 1906-Since	K306	32	3x2⅛HP
1141	Massey Harris, Binder, No. 3 (Serrated)	S213	20	3x2⅜
1141A	Massey Harris, Binder, No. 3 (Serrated)	S213	24	3x2⅜
1113A	McCormick, Folding Daisy Reaper, 1890-05; New Folding Daisy, 1905-10; Gear Drive Daisy, 1909-10	L166	20	3x2½
1113B	McCormick, Folding Daisy Reaper, 1897-05; New Folding Daisy, 1905-10; Gear Drive Daisy, 1909-10	L166	22	3x2½
1114A	McCormick, R. H., Impd. Binder, 1913	V768	24	3x2⅛
1114B	McCormick, R. H., Impd. Binder, 1913	V768	28	3x2⅛
1114C	McCormick, R. H., Impd. Binder, 1913	V768	32	3x2⅛
1120A	McCormick, Folding Daisy Reaper, 1890-95; New Folding Daisy, 1905-10; Gear Drive Daisy, 1909-10	L303	20	3x2½
1120B	McCormick, Folding Daisy Reaper, 1897-05; New Folding Daisy, 1905-10; Gear Drive Daisy, 1909-10	L303	22	3x2½
1123A	McCormick, New Open Elevator Harvester, L. H., 1901-Since	B23	24	3x2⅛
1123B	McCormick, New Open Elevator Harvester, L. H., 1901-Since	B23	28	3x2⅛
1123C	McCormick, New Open Elevator Harvester, L. H., 1901-Since	B23	32	3x2⅛
1123E	McCormick, New Open Elevator, L. H., Harvester, 1901-Since	B23	24	3x2⅛
1123F	McCormick, New Open Elevator, L. H., Harvester, 1901-Since	B23	28	3x2⅞
1124A	McCormick, New Open Elevator Harvester, R. H., 1901-Since	B410	24	3x2⅞
1124B	McCormick, New Open Elevator Harvester, R. H., 1901-Since	B410	28	3x2⅛
1124C	McCormick, New Open Elevator Harvester, L. H., 1901-Since	B410	32	3x2⅛
1125A	McCormick, New Open Elevator, R. H., Harvester, 1901-Since	B410	24	3x2⅛
1125B	McCormick, New Open Elevator, R. H., Harvester, 1901-Since	B410	28	3x2⅞
1125C	McCormick, New Open Elevator, R. H., Harvester, 1902-Since	B410	32	3x2⅞
1127A	McCormick, Impd. Binder, L. H., 1911	B756	24	3x2⅞
1127B	McCormick, Impd. Binder, L. H., 1911	B756	28	3x2⅛
1127C	McCormick, Impd. Binder, L. H., 1911	B756	32	3x2⅛
	Minnie, see American Grass Twine.			
1166A	Milwaukee, Steel Junior Harvester, No. 10, L. H., 1890-Since	S34	23	3⅜x2⅞
1166B	Milwaukee, Steel Junior Harvester, No. 10, L. H., 1890-Since	S34	27	3⅛x2⅞
1166D	Milwaukee, Steel Junior Harvester, No. 10, L. H., 1890-Since	S34	23	3⅛x2½
1166E	Milwaukee, Steel Junior Harvester, No. 10, L. H., 1890-Since	S34	27	3⅛x2½
1167A	Milwaukee, Steel Junior Harvester, No. 11, R. H., 1896-98	SE34	23	3⅛x2⅞
1167B	Milwaukee, Steel Junior Harvester, No. 11, R. H., 1896-98	SE34	27	3⅛x2⅞
1169A	Milwaukee, Harvester, No. 12, 1902-Since	SM342	24	3x2¾
1169B	Milwaukee, Harvester, No. 12, 1902-Since	SM342	28	3x2¾
1169C	Milwaukee, Harvester, No. 12, 1902-Since	SM342	32	3x2¾
1170A	Milwaukee, No. 12 Harvester, 1902-Since	SM342	24	3x3⅞
1170B	Milwaukee, No. 12 Harvester, 1902-Since	SM342	28	3x3⅞
1170C	Milwaukee, No. 12 Harvester, 1902-Since	SM342	32	3x3⅞
1171A	Milwaukee, Harvester, New No. 12, 1907-Since	SN342	24	3x2¾
1171B	Milwaukee, Harvester, New No. 12, 1907-Since	SN342	28	3x2¾
1171C	Milwaukee, Harvester, New No. 12, 1907-Since	SN342	32	3x2¾
1172A	Milwaukee, No. 12B, Harvester, 1907-Since	SN342	24	3x3⅞
1172B	Milwaukee, No. 12B, Harvester, 1907-Since	SN342	28	3x2⅞
1172C	Milwaukee, No. 12B, Harvester, 1907-Since	SN342	32	3x3⅞

BINDER AND HEADER SICKLES—Continued

For Price, See Page 699

No.	NAME AND DESCRIPTION	No. of Head	No. of Sections	Size of Sections
1193	Osborne, Junior, Binder, R. H., 1887-91 (Sec. Top of Rod)	B489	25	3x2¼
1194	Osborne, Junior, Binder, R. H., New Osborne, R. H., 1892-94	B489	29	3x2⅝
1195	Osborne, Binder, No. 11, 1885-91, (Sec. Bot. of Rod)	B587	29	3x2¼
1195B	Osborne, Binder, No. 11, 1885-91, (Sec. Bot. of Rod)	B587	25	3x2¼
1196	Osborne, Columbia, Harvester, L. H., 1895-02 (Sec. Top of Rod)	B587	25	3x2¼
1196B	Osborne, Columbia, Harvester, L. H., 1895-02 (Sec. Top of Rod)	B587	29	3x2¼
1196BB	Osborne, Columbia Harvester, L. H., 1895-02 (Thin Sec. Top of Rod)	B587	25	3x3LP
1196CC	Osborne, Columbia Harvester, L. H., 1895-02 (Thin Sec. Top of Rod)	B587	29	3x3LP
1197A	Osborne, Columbia Harvester, L. H., 1902-06	C328	25	3x3¼
1197B	Osborne, Columbia, Harvester, L. H., 1902-06	C328	29	3x2¼
1201A	Osborne, Harvester, 1909-Since	C533	25	3x2⅝
1201B	Osborne, Harvester, 1909-Since	C533	29	3x2⅝
1201C	Osborne, Harvester, 1909-Since	C533	33	3x2⅝
	Osborne, Harvester, 1914-Since (works for Heads Nos. C693 or CA533)	CA693	21	3x3LP
	Osborne, Harvester, 1914-Since (works for Heads Nos. C693 or CA533)	CA693	25	3x3LP
	Osborne, Harvester, 1914-Since (works for Heads Nos. C693 or CA533)	CA693	29	3x3LP
	Osborne, Harvester, 1914-Since (works for Heads Nos. C693 or CA533)	CA693	33	3x3LP
1237A	Plano, Jones Lever, No. 2, Binder, 1896-98 (Long Reg.)	L66	24	3x2⅛
1237C	Plano, Jones Lever, No. 2, Binder, 1896-98 (Long Reg.)	L66	28	3x2⅛
1238A	Plano, Jones Lever, No. 1, Binder, 1896-07; Jones Lever, No. 2, 1899-07 (Short Reg.)	L66	24	3x3⅛
1238B	Plano, Jones Lever, No. 1, Binder, 1896-07; Jones Lever, No. 2, 1899-07 (Short Reg.)	L66	28	3x2⅛
1244A	Plano, New Binder, L. H., 1907-09	L860	24	3x2 7/16
1244B	Plano, New Binder, L. H., 1907-09	L860	28	3x2 7/16
1244C	Plano, New Binder, L. H., 1907-09	L860	32	3x2 7/16
1245	Plano, New Binder, L. H., 1903-06	L633	24	3x2 7/16
1245A	Plano, New Binder, L. H., 1903-06	L633	28	3x2 7/16
1246A	Plano, New Binder, L. H., 1909-Since	L860	24	3x2⅛
1246B	Plano, New Binder, L. H., 1909-Since	L860	28	3x2⅛
1282A	Wood, New Century Harvester, L. H., 1905-Since	H2139	24	3x2 7/16
1282B	Wood, New Century Harvester, L. H., 1905-Since	H2139	28	3x2 7/16
1286	Wood, (Minneapolis)	K3011	24	3⅛x2½
1286A	Wood, (Minneapolis)	K3011	28	3⅛x2½

Any Sickle not mentioned in foregoing list can be furnished upon receipt of complete information.

MOWER AND BINDER KNIFE HEADS

Steel Heads to fit Acme Header	Each, $2.50
All other Steel Heads	Each, $1.10
Malleable Heads for Headers	Each, $1.10
All other Malleable Heads	Each, $0.74

Average weight of Knife Head 1½ lbs.

For other illustrations of Heads, see Page 703.

Will fit accurately the Machines for which they are intended.

No.	NAME AND DESCRIPTION
T6	Acme, Pony Mower, 1900-Since; New Hodges, 1901-Since; Giant, 1903-Since
V40	Acme, Queen Binder, L. H., 1901-Since
V258	Acme, Queen Binder, R. H., 1902-Since
1063	Acme, King Header, 1895-Since (Mall.)
A3014	Acme, Home Trade and Coast Hodges Header, 1893-Since (Steel)
A3014A	Acme, Home Trade and Coast Hodges Header, Gear Drive, 1916-Since; Chain Drive, 1915-Since (Steel)
JA102	Adriance, No. 7 Binder, L. H., replaces and interchanges J102
557F	Adriance, Nos. 7, 8, 9, 10 and H Mowers, 1892-Since
M1081	American Grass Twine Co., Minnie Mower, 1902-Since
K1356	American Grass Twine Co., Minnie Harvester, 1901-Since
301	Buckeye, Akron, Light Mower, Adj., Pit., 1876-91 (Steel)
864	Buckeye, Akron Light Mower, Adj. Pit., 1892-01; New Mower, 1892-94 (Steel)
1052	Buckeye, Akron, 1900
A415	Champion, New Mowers, 1893-96
A415X	Champion, Haymaker Mower, 1895-Since; Draw Cut, 1895-05
A870	Champion, New and Big Draw Cut Mower; 1905-Since; Vertical Lift, 1904-Since
A5792	Champion, Imp. and Imp. Vert. Mower, 1909-Since; Big Imp., 1911-Since; Weed Mowers, 1901-Since (Steel)
3027	Champion, New Champion Harvester, 1902-05 (Mall.)
2564	Champion, Improved Binder, 1909-Since
J191	Champion, Header, 1905-06 (Steel)
1852	Champion, (or 1740) Force Feed 1895-07
A1253	Champion, Mowers, Improved, Vertical, Big Improved, 1912-Since; (California Wood Pitman), (Mall)
J361	Champion, Push Header, 1905-06 (Mall.)
	Crown, (See Thomas.)
	Dain (See Deere).
Z502	Deere, Mower, 1922-Since (Mall.)
Z45A	Deere, Mower, 1919-Since
Z45	Deere, Mower, 1895-Since

MOWER AND BINDER KNIFE HEADS—Continued

For Price, See Previous Page

No.	NAME AND DESCRIPTION.
Z45E	Deere, Mower, 1895-Since
HZ57	Deere, Binder, 1912
HZ493	Deere, Binder, 1914-Since (Mall.)
F123	Deering, New Deering Mower, 1892-97; Front Cut Giant, 1892-96; Ideal, 1892-04; Ideal Giant, 1896-04 (Steel)
D463	Deering, Ideal and Ideal Giant Mower, 1898-Since; New Ideal and New Ideal Vertical, 1905-06; New Ideal Giant, 1906-Since; Ideal "B," 1909-Since; Weed Mower, 1906-Since
D626	Deering, Ideal Vertical Lift Mower, 1902-06
D920	Deering, Ideal Giant Mower, 1909-Since; Ideal "B," 1909-Since
E449	Deering, Junior and Improved Steel Harvester and Binder, 1890-93
E701	Deering, Junior and Improved Steel Harvester and Binder, 1893-00 (interchangeable E449)
846	Deering, No. 2 Headers, 1905-Since (Mall.)
923	Deering, Push Binder and Push Header, 1913 (Mall)
DA920	Deering, Ideal Mower, 1909-11; New Ideal 1909-12; New Ideal B, 1909-Since (Steel)
H260	Deering, Ideal Harvester and Binder, 1898-03
H877	Deering, Ideal Harvester and Binder, 1903-09; New Ideal Harvester, 1908-Since
A46	Deering, Pony Binders, 1893-98
515	Deering, Push Header and Binder, 1901-03
787	Deering, Push Header and Binder, 1904-05 (not Portland and Spokane)
M195	Emerson, Standard Mowers, 1899-00 (3-in. section) 4 to 8 ft. (Z94) (Mall.)
M203	Emerson, Standard Mowers, 1900-Since; New Standard, 1903-Since; 4 to 6 feet
M204	Emerson, Standard Mowers, 1900-Since; New Standard, 1906-Since; 7 to 8 feet
M224	Emerson, Standard Mowers, 1900-Since; 4 to 8 ft.
M51	Independent, Mower, 1910-Since
N143	Independent, Binder, 1910-Since
124	Johnston, No. 5 Mower, 1879-97; No. 6 Mower, 1880-95; No. 8 Globe, 1890-95; Mayflower, G. D., 1887-95.
919	Johnston, No. 6 Cont., No. 8 Globe, No. 9 C. D., and Mayflower Mowers, 1896-Since; No. 10 Gear Drive 1901-Since
2211	Johnston, New No. 10 Mowers, H. C., 1909-Since
K306	Johnston, Continental, L. H., Harvester, 1900-Since
L756	Johnston, Bonnie Binder, 1900-Since; Continental, R. H., Harvester, 1901-Since
A184	Keystone, Mower, Gear Drive, (1906-Since (Mall.)
M139	McCormick, Mower, No. 4 and Big 4, 1887-97; New No. 4; New Big 4, 1898-Since
L166	McCormick, Folding Daisy Reaper, 1890-05; New Folding, 1905-10; Gear Drive Daisy, 1909-Since (Wd. Pit.)
L303	McCormick, Folding Daisy Reaper, 1890-05; New Folding, 1905-10; Gear Drive Daisy, 1909-Since (St. Pit.)
H732	McCormick, Pipe Frame Harvester, 1890-01
B23	McCormick, New Open Elevator, L. H., Harvester, 1901-Since; Foreign Low Bar Harvester, 1901-Since.
B410	McCormick, New Open Elevator, R. H., Harvester, 1901-Since; Foreign Low Bar Harvester, 1901-Since.
B756	McCormick, Improved Binder, L. H., 1911
MA139	McCormick, Mower, No. 6 and No. 6 Vert., 1918-Since, Big 6 1918-Since (Steel)
K43	McCormick, Open Elevator, R. H., Harvester, 1894-01; Binder, 1894-1901 (Mall.)
J191	McCormick, Header, 1900-Since (Steel)
J361	McCormick, Header Binder, 1902-Since
V768	McCormick, R. H. Impd. Binder 1913
M999	McCormick, Weed Mower, New 4, Vertical, New Big 4, 1896-Since (Mall.)
M1708	Massey Harris, Mower, Nos. 15, 20 and 21 (Steel)
S213	Massey Harris, Binder, No. 3 (Mall.)
PG6	Milwaukee, Mower, No. 6 Chain Drive, 1892-Since; No. 5, 1894-Since; No. 3, 1898-Since
S34	Milwaukee, Steel, Jr., No. 10, L. H., Harvester, 1889-Since (Mall.)
SE34	Milwaukee, Steel, Jr., No. 10, R. H., Harvester 1898-Since
SM342	Milwaukee, No. 12, Harvester, 1902-Since
SN342	Milwaukee, No. 12B, Harvester, 1907-Since
A184	Milwaukee, Keystone Mower, 1906-Since
	Minnie, see American Grass Twine.
K212	Osborne, Mower, Nos. 3, 4 and Big 4, 1885-92; B, C and D, Foreign, 1897-98 (Replaces K50)
K229	Osborne, Mower, No. 4 and Big 4, 1893-98 (for Hook Pit.)
K284	Osborne, Mower, Columbia, B, C and D, 1896-01 (for K223 Section) (Replaces K374)
K520	Osborne, Mower, Columbia, B, C and D, 1902-05 (for K223 Section) (Replaces K284)
K512	Osborne, Mower, Columbia, B, C and D, 1902-05 (for 5406 Sec.)
K677	Osborne, Mower, Osborne Nos. 1, 2 and 3, 1903-04 (Ball Pit.)
K774	Osborne, Mower, Osborne Nos. 1, 2 and 3, 1905-Since (Ball Pit.); New Osborne Nos. 2 and 3, 1909-Since.
K791	Osborne Mower, Osborne Nos. 1, 2, 3, Ball Pit. New Osborne Nos. 2, 3 1909-Since (Mall)
B587	Osborne, Columbian Harvester, L. H., 1885-02
C328	Osborne, Columbian Harvester, L. H., 1902-06; Osborne Harvester, 1905-09 (Mall.)
C533	Osborne, Binder, 1908-11 (Mall.) (Works for C693, CA693 and CA533).
CA693	Osborne, Binder (Works for C693, C533 and CA533)
L1082	Plano, New Plano Binder, 1912-Since (Mall.)
J94	Plano, Mowers, Chain Drice, 1894-07; Gear Drive, 1898-01; Vertical, Jr., 1902-Since
J429	Plano, Mowers, Vertical and Big Vertical, 190-Since; Plain and Big Plain, 1907-Since
L66	Plano, Jones Lever Binder, Nos. 1, 2, 3 and 4, 1895-07
L633	Plano, New Plano Binder, L. H., 1903-06
L860	Plano, New Plano Binder, L. H., 1907-Since
	Standard (see Emerson).
6	Thomas, (Crown), New Mower, 1898-Since
1784	Wood, Tubular Steel Mower
1483	Wood, Tilt Bar Mower, 1885 and 1886
470	Wood, Mower, Tubular Steel, Enclosed Gear, 1887-92
1810	Wood, Mower, Tubular Steel, 2 H., 1891-Since (Replaces 1784)

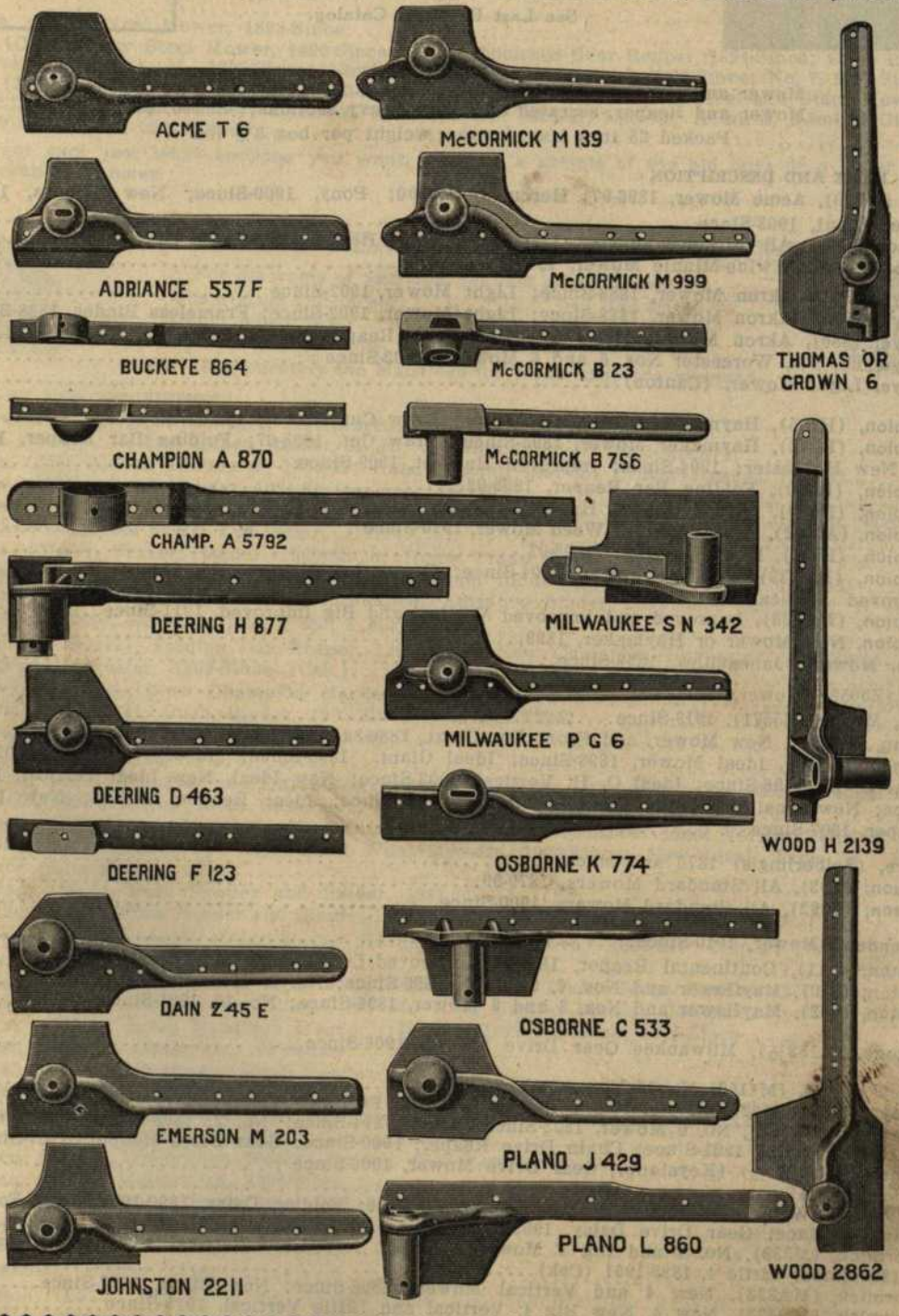
MOWER AND BINDER KNIFE HEADS—Continued

For Price, See Page 701.

1680	Wood, Mower, Tubular Steel, 2 H., 1892-Since; Giant, 1901-Since (with A Guard)
2479	Wood, Mower, Tubular Steel, 2 H., 1903-Since; Giant, 1903-Since (with 2355 Guard)
2862	Wood, Mower, Admiral and Vice-Admiral, 1907-Since; Admiral Giant, 1908-Since (with L Guard)
H2036	Wood, Harvester, Open Rear, L. H., 1895-97
H2139	Wood, Harvester, Open Rear, L. H., 1898-Since; New Continental, L. H., No. 3, 1902-Since; No. 5, 1905 Since; No. 7, 1907-Since; 8-foot, 1906-Since
K366	Wood, Vertical Lift No. 2, 1915-Since

In ordering be sure to give us name of the machine and number of head.

The illustrations below show only a few of the more popular Knife Heads as listed on the preceding pages.



STOWE REPAIRS FIT AND GIVE SATISFACTION

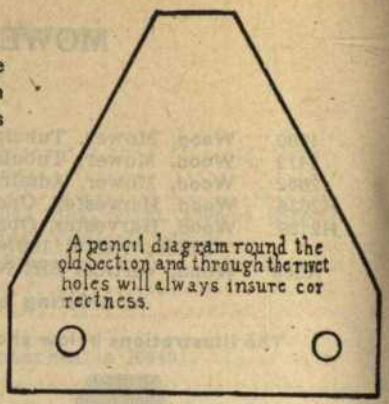
MOWER SECTIONS

We regularly furnish Smooth Sections on all of the patterns listed below. We can also furnish Rough Weed Sections in various patterns. Smooth Sections shipped on all orders unless otherwise specified.

ALL SECTIONS ARE OIL TEMPERED.

Will fit accurately the Machines for which they are intended.

For Outline Diagrams of Sections, See Last Pages in Catalog.



Mower and Reaper, smooth sections . . . . . Per 100, $ 8.50
Mower and Reaper, serrated and extra heavy sections. Per 100, $10.50
Packed 25 in a box. Approx. weight per box 3½ lbs.

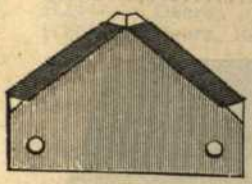
No.	NAME AND DESCRIPTION	Size
1302	Acme, (M370), Acme Mower, 1896-97; Hercules, 1898-00; Pony, 1900-Since; New Hodges, 1901-Since; Giant, 1903-Since	3x3⅛
1332	Adriance, (745), All Adriance Mowers, 1876-Since; No. 6 Reaper, 1910-Since	3x3⅛
1321	American, Grass Twine-Minnie Mower, 1902-Since	3x3⅛
1361	Buckeye, (302), Akron Mower, 1888-Since; Light Mower, 1902-Since	3x3⅛
1362	Buckeye, (675), Akron Mower, 1888-Since; Light Mower, 1902-Since; Frameless Binder, 1888-Since	3x3⅜LP
1363	Buckeye, (880), Akron Mower, 1888-Since; Reel Rake Reaper, 1898-Since	3x3⅜HP
1364	Buckeye, (V. V.), Worcester Nos. 5 and 6 Mowers, 1902-Since	3x3⅛
1366	Buckeye, Light Mower, (Canton)	3x3½
1382	Champion, (H155), Haymaker Mower, 1895-Since; Draw Cut Mower, 1895-07	3x3⅛
1383	Champion, (H273), Haymaker Mower, 1895-Since; Draw Cut, 1895-07; Folding Bar Reaper, 1903-08; New Harvester; 1904-Since; Improved Harvest, 1909-Since.	3x3⅛
1384	Champion, (H250), Folding Bar Reaper, 1899-02	3x3
1386	Champion, (H489), (Extra Heavy) Haymaker Road Mower, 1899-Since	3x3⅛
1387	Champion, (A5732), (Extra Heavy) Weed Mower, 1910-Since	3x3⅛
1388	Champion, (P517), New Harvester, 1902-03	3x3⅛
1389	Champion, (MA333), Vertical Mower, 1904-Since; Draw Cut Mower, 1905-Since; Improved and Improved Vertical, 1909-Since	3x3⅛
1390	Champion, (MB333), Improved and Improved Vertical and Big Improved, 1911-Since	3x3¼
1392	Champion, New Mower or Haymaker, 1899	3x3⅛
1414	Crown, Mower, (Janesville), 1898-Since	3x3½
1424	Dain, (Z5059), Mower, 1895-1918	3x3⅛
1427	Deere, Mower (Z5571), 1919-Since	3x3⅛
1439	Deering, (C1092), New Mower, and Front Cut Giant, 1886-88; Ideal Reaper, 1894-99	3x3¼
1440	Deering, (D1140), Ideal Mower, 1893-Since; Ideal Giant, 1895-Since; Ideal Vertical, 1902-06; Ideal O. H., 1896-Since; Ideal O. H. Vertical, 1903-Since; New Ideal, New Ideal Vertical, 1905-Since; New Ideal Giant, 1906-Since; Type "B," 1909 Since; Ideal Reaper, 1900-08; New Ideal Reaper, 1907-Since	3x3⅛
1465	Empire, (Seiberling's) 1876 and since	3x3⅜
1473	Emerson, (Z92), All Standard Mowers, 1879-99	3x3⅛
1475	Emerson, (Z292), All Standard Mowers, 1900-Since	3x3⅛
1485	Independent, Mower, 1910-Since	3x3⅛
1498	Johnston, (111), Continental Reaper, 1878-93; Improved Continental Reaper, 1891-Since	3x3⅛
1499	Johnston, (920), Mayflower and Nos. 6, 8 and 9, 1896-Since; No. 10 Mowers, 1901-Since	3x3⅜
1503	Johnston, (902), Mayflower and Nos. 8 and 9 Mower, 1896-Since; No. 10, 1901-Since	3x3⅛
1522	Keystone, (A188½), Milwaukee Gear Drive Mower, 1906-Since	3x3⅛
1585	Massey Harris, (M1150) No. 15 Mower	3x3¼
1586	Massey Harris, (M2260-2 Hole) Nos. 20 and 21 Mowers, 1916 and Since.	3x3⅜
1547	Milwaukee, (PG155), No. 6 Mower, 1892-Since; No. 5, 1894-Since; No. 3, 1898-Since, and Nos. 8, 5 and 6, Foreign, 1901-Since; Chain Drive Reaper, 1900-Since; Gear Drive Reaper, 1907-Since.	3x3⅛
1550	Milwaukee, (A188½) (Keystone), Gear Drive Mower, 1906-Since	3x3⅛
1562	Minnie.	3x3¼
1567	McCormick, (W. E.), Imperial and Daisy Reaper, 1882 90; Folding Daisy, 1890-1905; New Folding Daisy, 05-Since; Gear Drive Daisy, 1909-Since	3x3⅛
1570	McCormick, (M333), No. 4 and Big 4 Mowers, 1888-97; New 4 and Vertical, 1886-Since; New Big 4, 1898-Since; Little 4, 1889-1901 (Csk)	3x3⅛
1572	McCormick, (MA333), New 4 and Vertical Mowers, 1896-Since; New Big 4, 1898-Since	3x3⅛
1573	McCormick, (MB333), New 4, New Big 4, Vertical and Little Vertical, 1910-Since	3x3¼
1574	McCormick, (L1201), New Folding Daisy Reaper, 1905-10; Gear Drive Daisy, 1909-Since	3x3BT
1575	McCormick, (M333½, 12 Gauge), New 4, New Big 4 and Vertical, Weed Mowers. 1896-Since.	3x3⅛
1594	Osborne, (K223), Nos. 3 and 4 and Big 4 Mowers, 1893-98; Columbian B. C. and D. Mowers, 1896-05	3x3HP
1595	Osborne, (5406), Nos. 1, 2 and 2 Mowers, 1903-Since; Columbian B, C and D Mowers, 1902-05; New Osborne Nos. 2 and 3, 1909-Since	3x3⅛

MOWER SMOOTH SECTIONS—Continued

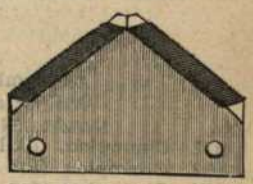
For Price, See Previous Page

No.	NAME AND DESCRIPTION	Size
1596	Osborne, (831½), Nos. 3 and 4 and Big 4 Mowers, 1885-92; Columbian B, C and D, 1896-98; No. 8 Reaper, 1881-05; Columbian Reaper, 1894-Since; New Osborne Reaper, 1909-Since; Columbian Harvester, 1895-06; Osborne Harvester, 1905-Since	3x3LP
1610	Plano, (7405), Jones Chain Mower, 1889-97; Jones Chain, Jr., Mower, 1896-97	3x3⅛
1611	Plano, (D1140), Vertical, Big Vertical and Vertical, Jr., Mowers, 1906-Since; Plain and Big Plain, 1907-Since; New Plano Reaper, 1911-Since	3x3¼
1615	Plano, (7406), Jones Chain Mower, 1895-07 (3 hole, under Head)	3x3⅛
1616	Plano, (7408), Jones Vertical, Big Vertical and Vertical, Jr., 1901-05 (3 hole, under Head)	3x3⅛
1617	Plano, (7407), Jones Vertical, Big Vertical and Vertical, Jr., 1901-05; Jones Chain and Chain Jr., 1898-07; Jones Gear, 1898-01 (use D1140)	3x3⅛
	Standard (See Emerson).	
1635	Tiger	3x3⅛
1639	Thomas, (1077), New Mower, 1898-Since	3x3¼
1643	Wood, (C), Tubular Steel Mower, 1890-Since; Light Enclosed Gear Reaper, 1894-Since; Open Rear Harvester, R and L. H., 1895-Since; New Century Harvester, No. 3, 1903-Since; No. 7, 1907-Since	3x2⅝
1644	Wood, (3410), Tubular Steel Mower, 1892-Since (with Guard A); Tubular Steel and Giant Mower, 1903-Since (with 2355 Guard); Enclosed Gear Tilt Bar Mower, 1887-92; Admiral, Admiral Giant and Vice-Admiral, 1907-Since	3x3⅛

If you are not sure just what sections you want, send us a sample of the old ones or a paper diagram showing exact size and location of holes.



BINDER AND HEADER SERRATED SECTIONS



For diagrams of Sections, see last pages in catalog.
4-inch sizes and larger.....Per 100, $10.50
Under 4-inch sizes.....Per 100, $ 8.50
Packed 25 in a box. Approx. weight per box 2 lbs.
Will fit accurately the Machines for which they are intended.

No.	NAME AND DESCRIPTION	Size
1914AA	Acme, (AH830A), All Headers, 1915-Since	4x2⅞
1914A	Acme, (V322), Hodges Queen Binder, L. H., 1901-Since; R. H., 1902-Since	3x2¼
1914B	Acme, (379), Queen Harvester, 1895-00; Rand Header, 1892-03; Craver Header, 1892-93	3x2
1914C	Acme, (379B), Rand Header, 1894-01 (repiaces AH220)	4x2⅛
1914D	Acme, (AH220), Coast Hodge Header, Chain Drive, 1893-Since; Home Trade Hodge Header, 1893-06 (replaces 379D; Csk. Top)	4x2⅛
1914E	Acme, (379D), Craver Header, 1906-Since; Home Trade Hodge, 1907-Since	4x2⅛
1914G	Acme, (2773), Craver Binder, 1895-00; King Header Binder, 1895-Since (points clipped)	3x2
1921A	Adriance, (A84), Triumph Reaper, 1895-Since; Adriance Binder, 1897 Since and No. 7, L. H.	3x2½
1924B	Buckeye, (3545), Adriance Nos. 7 and 8 Mower	3x3⅛
1932B	Champion, (G241), Folding Bar Reaper, 1903-Since; New Champion Harvester, 1904-Since; Improved Harvester, 1909-Since (Csk.)	3x3PT
1932C	Champion, (P518), New Champion Harvester, 1902-03 (not Csk.)	3x3PT
1932E	Champion, (V2587), Push Binder, 1905-Since (old No. Z225)	3x2½
1932F	Champion, Harvester, 1882, notched on back	3x2⅝
1939	Deere, Binder, Z5186, 1910	3x2⅛
1948	Deering, (E1328), Junior and Improved Harvester, 1890-00; Pony Harvester, 1893-98; Ideal Harvester, 1898-09; New Ideal Harvester, 1908-Since	3⅛x2⅛
1948B	Deering, (H2164), Ideal Mower, 1893-Since; Ideal Giant, 1895-Since; Ideal Vertical, 1902-06	3x3¼
1948C	Deering, (D1773), Ideal and Ideal Giant Weed Mowers, 1904-Since; New Ideal, Type "B," 1910-Since (Heavy)	3x3¼
1949	Deering, (1565), Push Header and Binder, 1902-06	3⅛x2⅛
1949B	Deering, (2412), Push Header and Binder, 1907-Since; No. 2 Header, 1905-Since (Csk.)	4⅜x2⅝
1961	Header, (AH220), Acme Coast Hodge Header, Chain Drive, 1893-01; Home Trade Hodge Header, 1893-06	4x2⅛LP
1961A	Header, (379D), Acme Craver Header, 1906-Since; Home Trade Hodge Header, 1907-Since	4x2⅛HP
1962	Header, (2773), Acme Craver Binder, 1895-00; King Header Binder, 1895-Since (points clipped)	3x2
1963	Header, (379B), Acme Randolph Header, 1894-01; Craver Header, 1895-Since	4x2⅛
1973	Header, (V2146), Champion, 1905-Since	4x2⅛
1975	Header, (V2587), Champion Push Header, 1905-Since	3x2½
1979	Header, Harvester King	3x2
1987	Header, (408H), Johnston Combination Header, 1894-Since; Wood Header, 1893-98	4x2⅛
1992	Header, (J190), McCormick, 1900	4x2⅛
1992A	Header, (Z255), McCormick Header Binder, 1902-Since	3x2½
1992B	Header, (J226), McCormick, 1901-Since	4x2⅛
1998	Header, (9255), Plano Jones Steel, 1898-02	4x2
1998A	Header, (9254), Plano Jones Steel, 1892-97	3x2
1998C	Header, (Piano)	4x2⅛
2009	Independent. Binder, 1910	3⅛x2½
2015B	Johnston, (L515), Bonnie Binder, 1896-99; New Continental Binder, 1898-99	3x2⅜LP
2021	Keystone, (PG155S), Milwaukee Gear Drive Reaper, 1907-Since	3x2¾
2051A	Massey Harris (336A) No. 3 Binder (Serrated)	3x2⅝
2032	Milwaukee, (S344), Steel, Jr., No. 10, L. H., Harvester, 1889-Since	3⅛x2⅛
2032B	Milwaukee, (SL877), No. 12, L. H., Harvester, 1900-Since	3x2¾
2032C	Milwaukee, (PG155S), Chain Drive Reaper, 1900-Since	3x2¾

BINDER AND HEADER SECTIONS—Continued

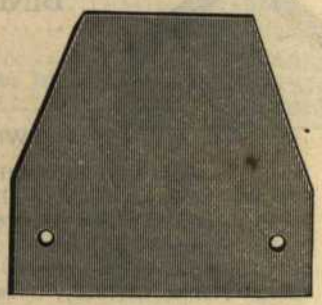
For Price, See Previous Page

No.	NAME AND DESCRIPTION	Size
2047	McCormick, (762), Pipe Frame Harvester, 1886-01; Open Elevator, R. H., Harvester, 1895-01; New Open Elevator, R and L. H., 1901-Since	3x2⅛
2047A	McCormick, (L127), Folding Daisy Reaper, 1890-05; New Folding Daisy, 1905-Since; Gear Drive Daisy, 1909-Since (Csk.)	3x2½
2047B	McCormick, (LA127), New Folding Daisy Reaper, 1905-Since; Gear Drive Reaper, 1909-10 (not Csk.)	3x2½
2051A	Massey Harris, (336A), No. 3 Binder to 1915; No. 5, 1915-Since (Serrated)	3x2⅜
2055	Osborne, (831), No. 8 Reaper, 1881-05; Columbian Reaper, 1894-05; Columbian Harvester, 1895-06; Osborne Harvester, 1905-09	3x2¼
2055A	Osborne, (2943), Columbian Reaper, 1906-Since; New Osborne Reaper, 1909-Since; Columbian Harvester, 1906-Since; New Osborne Harvester, 1909-Since	3x2⅝
	Osborne, (011259S), Harvester, 1915-Since	3x2½
2063	Plano, (6153), Jones, No. 1 Lever Binder, 1895-07; No. 2, 1896-07; No. 3, 1891-95	3x2 7/16
2063C	Plano, (L2290), New Plano Harvester, R. and L. H., 1903-Since	3x3
2063D	Plano, (L2875), New Plano Harvester, L. H., 1907-09	3x2 7/16
2063E	Plano, (E2174), Jones Reaper, 1906-11	3x2 7/16
2063F	Plano, (E2331), New Plano Reaper, 1911-Since	3x2⅞
2079A	Wood, (C), Light Enclosed Gear Reaper, 1894-Since; All Open Rear, R. or L. H., Harvester, 1894-Since; New Century, R. or L. H., Harvester, 1903-Since	3x2⅝
2079B	Wood, (7268), New Century, L. H., Harvester, 1905-Since	3x2 7/16

BLANK OR HEEL SECTIONS

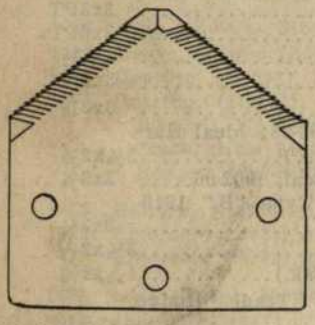
All numbers.....Per 100, $8.00

Will fit accurately the Machines for which they are intended.



No.	NAME AND DESCRIPTION	Style	Size
1872	Champion, (All Styles)	Solid	
1873	Champion (for A5792 Head)		4x4⅜
1874	Champion (for A1206 Head)		4x4⅜
1877	Buckeye, Canton and Akron	Solid	4x3¾
1883	Deering, (All Styles)	Solid	
1892	Emerson	Solid	4x2 11/16
1899	Osborne	Solid	4 11/16x3
1900	Osborne, for K774 Head. No. 1, 2, 3 Mowers.		
1901	Osborne (for K284 Head)		4⅞x3 5/16
1902	Osborne (for K677 Head)		4⅞x3¾
1907	Standard	Solid	4x2 11/16

CORN HARVESTER SECTIONS



Smaller than 4-inch.....Per 100, $18.00

4-inch.....Per 100, $24.00

Larger than 4-inch.....Per 100, $30.00

Will fit accurately the Machines for which they are intended.

No.	NAME AND DESCRIPTION	Size
1709	Acme, CH643, Serrated	3½x4
1715	Champion, (C5188), 1903-Since	4x3½
1916	Deere, (H1038)	4x3 11/16
1720	Deering, (Y1139), Deering 1896-99; Ideal, 1899	3⅛x3⅛
1721	Deering, (Y1788), Deering 1900; Ideal, 1900-05	3⅛x3⅛
1722	Deering, (Y2393), Ideal, 1906-Since; 4 holes	5x3¾
1737	Johnston (E154), 1898-00	3x3
1738	Johnston, (E571), 1900-Since	3x3
1740	Johnston, Serrated	4x3½
1749	McCormick, (C143), 1895-Since	4x3½
1757	Milwaukee, (VB653), 1902-Since	4x3½
1763	Osborne (3642), Smooth, Columbia, 1895-1900; Osborne, 1901-Since.	4x3½
1768	Plano, (C2521), 1903-Since	4x3½

CORN HARVESTER SIDE KNIVES

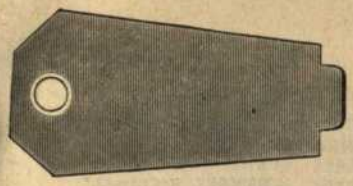
All numbers.....Each, $0.60

Will fit accurately the Machines for which they are intended.

No.	NAME AND DESCRIPTION
1792	Champion, (C5186), Right, 1903-Since
1793	Champion, (C5187), Left, 1903-Since
1794	Deere, (1039), Outer
1795	Deere, (1040), Inner)
1801	Deering, (Y1341), Deering, Left, 1898-1900
1802	Deering, (Y1342), Deering, Right, 1898-1900
1803	Deering, (Y1454), Deering, Right, 1899
1804	Deering, (Y1455), Deering, Left, 1899
1805	Deering, (Y1520), Ideal, Right, 1899-1900
1806	Deering, (Y1521), Ideal, Left, 1899-1900
1807	Deering, (Y2109), Ideal, Left, 1901-Since
1808	Deering, (Y2110), Ideal, Right, 1901-Since
1819	Johnston, (E526), Right, 1901-Since
1820	Johnston, (E527), Left, 1901-Since
1821	Johnston, (E526C), Right, 1910-Since
1822	Johnston, (E527C), Left, 1910-Since

No.	NAME AND DESCRIPTION
1829	McCormick, (C288), Right, 1895-1897
1830	McCormick, (C289), Left, 1895-1897
1831	McCormick, (C612), Right, 1898-Since
1832	McCormick, (C613), Left, 1898-Since
1841	Milwaukee, (VB651), Right, 1902-Since
1842	Milwaukee, (VB652), Left, 1902-Since
1847	Osborne, (2191), Right, Columbia, 1895-1900, 3 Hole
1848	Osborne, (2192), Left Columbia, 1895-1900, 3 Hole
1849	Osborne, (5210), Right, Osborne, 1901-Since, 2 Hole
1850	Osborne, (5211), Left, Osborne, 1901-Since, 2 Hole
1857	Plano, (C2437), Left, 1903-Since
1858	Plano, (C2439), Right, 1903-Since

GUARD OR LEDGER PLATES



For diagrams of Plates, see last pages in catalog.

All Guard Plates for mowers are serrated; for binders, smooth.

All numbers.....Per 100, $6.60

Packed 25 in a box. Approx. weight per box 1¾ lbs.

Will fit accurately the Machines for which they are intended.

No	NAME AND DESCRIPTION.
M369	Acme, for M181 and T2 Mower Guards
M369C	Acme, for T2B (Ser.)
V320	Acme, for V43, Binder Guards V43A, E80, E80A
716½	Adriance, for 716, 990 and 2090, Mower Guards
716½B	Adriance, for 564X, 3087 and 3287, Mower Guards, 3087C, 3087D
716½C	Adriance, for 3087E
885	Buckeye, for 773, 774, 775X and E214, Mower Guards
H253	Champion, for A465, A811, A881 and AA881, Mower Guards
G167	Champion, for B629, 3025, 3026 and 2594, Mower Guards
	Crown. (See Thomas.)
Z5062	Dain, for Z5, Mower Guards 22
	Dain, for Z1E Guard or Deere
Z5110	Deere, for Z1, Z1A, Z463, Z439 Guards, Z227 Outside Shoe
HZ147	Deere
HZ5183	Deere, Binder, for HZ147 Smooth
D1043	Deering, for F, F½, F99½ and D442, Mower Guards
D1739	Deering, for D698, D691, Mower Guards
E1330	Deering, for 286, Binder Guards
M186S	Emerson, for S, H and M504, Mower Guards
M208S	Emerson, for M527, Mower Guards
912	Johnston, for 897 and 1811, Mower Guards
K364	Johnston, for K307, Binder Guards
M219½	Keystone, for A161, Mower Guards
D157	Massey Harris, for S220 and S220A
M2082	Massey Harris, for M765 Guards
M2494	Massey Harris, for M803 (Ser.)
M219½	McCormick, for M253, M462 and M804, Mower Guards
MA990	McCormick, for MA989, Mower Guards
121	McCormick, for L1, LA1, LB1 and LC1, Mower Guards
H507	McCormick, for H495 and HA495, Binder Guards
H917½	McCormick, for H917, HA917, H954 and HA954, Binder Guards
PG201S	Milwaukee, for PK5S (Old Style, Narrow Tongue), Mower Guards
P201S	Milwaukee, for PK5S (New Style), Mower Guards
SM681	Milwaukee, for SM37 and SN37, Binder Guards
K224	Osborne, for K72, Mower Guards
K322	Osborne, for K280, Mower Guards
5401	Osborne, for K514 and K529, Mower Guards
11565	Osborne, for K790
7239	Plano, for H46, J110, J124, J136, X44 and E847, Mower Guards J336
D1739	Plano, for Mower Guards J568
5949	Plano, for L29, L67, L180, Binder Guards
5950	Plano, for L31, L236, L300, Binder Guards
1046	Thomas, for '03, Mower Guards
3467	Wood, for A C538, Mower Guards
7166	Wood, for 2355, Mower Guards
9386	Wood, for R, Mower Guards
9571	Wood, for L, Mower Guards
3467	Wood, for A (Smooth or Serrated) Guards

SHOE PLATES

All numbers.....Per 100, $6.60

Packed 25 in a box. Approx. weight per box, 1¾ lbs.

Will fit accurately the Machines for which they are intended.

No.	Name and Description.
M369	Acme Inside Shoe
M369B	Acme Outside Shoe
716½A	Adriance, for N53 and Outside Shoe
	Buckeye Inside Shoe
H308	Champion Inside Shoe
Z5384	Dain Inside Shoe
Z5110	Dain Outside Shoe
Z5204	Dain, on Outer Shoe
Z5204	Deere, on Outer Shoe
D1043	Deering Outside for D442 Guard
D1227	Deering, Inside Shoe, '98-11
D1364	Deering Inside for D698 Guard
D2686	Deering Outside for D698 Guard
M187S	Emerson, for Outside Shoe
M218S	Emercon, for Inside Shoe
M314	McCormick Inside for M462 Guard
MB314	McCormick Inside for MA989 Guard
M330	McCormick Outside for M62 and MA989 Guard
MB330	McCormick, Outside Shoe 12-13
M314	Milwaukee, Inside, Gear Drive, '06-11
MB314	Milwaukee, Inside, Gear Drive, '12
M330	Milwaukee, Outside, Gear Drive, '06-12
PG158	Milwaukee, Inside, Chain Drive, '95
D1739	Plano, Outside Shoe
7245	Plano, Inside Shoe
	Wood, Outside Shoe
9572	Wood, Inside and Outside Shoes

GUARDS

ACME T2

DEERING D 698

INDEPENDENT M 52

OSBORNE K 514

ADRIANCE 3087

DEERING 286

McCORMICK M 462

OSBORNE C 341

BUCKEYE 775

DAIN ZIE

McCORMICK M A 989
M D 989

PLANO J 136

CHAMPION A 811

EMERSON M 527

McCORMICK H A 495

PLANO L 630

CHAMPION A 881

JOHNSTON 1811

MILWAUKEE P K 5

THOMAS OR CROWN 03

CHAMPION 3025

JOHNSTON K 307

MILWAUKEE SN 37

WOOD A

Header Guards, Double, with plate	Each, $0.56
Header Guards, Triple, with plate	Each, $0.74
Guards to fit Deere, Deering and McCormick Binders	Each, $0.36
All other Guards	Each, $0.50
Guard Rails only	Each, $0.06

Approximate weight of average Guards 1 lb.

All guards for mowers are furnished with serrated plates; for binders, smooth.

Will Accurately Fit the Machines for Which They are Intended.

No.	NAME AND DESCRIPTION
M75	Acme, Mower, 1896-97 (also Esterly); Replaced by M181.
M181	Acme, Mower, Hercules, 1898-Since
T2	Acme, Mower, Pony, 1900-Since; New Hodges, 1901-Since; Giant, 1903-Since; Anglo-American Reaper, 1902-Since.
V43	Acme, Harvester, Queen Binder, 1901-Since
	Acme, Headers, see Headers.
T2B	Acme, Mower, Vertical Lift, 1916-Since
3087	Adriance, 1897-1902, Nos. 7 and 8 Mowers
3087D	Adriance, Mower, Nos. 7 and 8, 1914-Since; replaces Nos. 3087 and 3087C
3087E	Adriance, Mower, Nos. 7 and 8, 1914-Since; uses No. 716½C Plate
2090	Adriance, Binder, No. 7 L. H.
564B	Adriance, Mower, Nos. 7, 8 and H, Part of 1899 only (Rd. Hole)
3087C	Adriance, Mower, Nos. 7 and 8, 1910-Since; Interchangeable with 3087
M262	American Grass Twine, Mower (Wood), St. Paul, 1903.
775	Buckeye, Mower, Akron, New Buckeye and Light Mowers, 1895-Since (New Style)
773	Buckeye, Mower, Akron, New Buckeye, 1888-95 (inside).
774	Buckeye, Mower, Akron, New Buckeye, 1888-90 (outside).
T35	Buckeye, Binder, Akron, Frameless, 1890-Since; Banner, '88-Since.
511	Buckeye, Mower, Outside.
242	Buckeye, Mower, Outside.
A42	Champion, Mower, Draw Cut, 1895-07; Haymaker, 1895-Since; Wrought (Replaced by A431)
A431	Champion, Mower, Draw Cut, 1895-Since; Haymaker, 1895-Since (Replaces A42)
A465	Champion, Mower, Draw Cut and Haymaker, 1895-00 (A811 will work)
A881	Champion, Mower, New and Big Draw Cut, 1905-Since; Vertical Lift, 1904-Since
A811	Champion, Mower, Draw Cut, 1901-07; Haymaker, 1901-Since; Folding Bar Reaper, 1893-Since
AA881	Champion, Mower, Improved and improved Vertical. 1909-Since.
3025	Champion, Harvester, New Binder, 1902-Since; Improved, 1909-Since.

GUARDS—Continued

For Price, See Previous Page

No.	NAME AND DESCRIPTION
O3	Crown, Mower, prior to 1898
O3½	Crown, Removable Guard Rail for No. 03 Guard
Z1E	Dain, Mower, 1895-Since (Replaces Z5)
Z5E	Dain, Mower, 1912-Since
Z1E	Deere, Mower, 1895-Since (Replaces Z5)
Z5E	Deere, Mower, 1912-Since
HZ147	Deere, Binder, 1910-Since
Z1	Deere, Mower, 1913-Since
Z439	Deere, Mower, 1919-Since (Use for Z1A)
Z463	Deere, Mower, 1922-Since (Works for Z439 and Z1A)
F99½	Deering, Mower, New, 1890-97; Front Cut Giant; 1890-96; Ideal, 1893-97 (2¼ in. Section)
F½	Deering, Mower, Ideal, 1894-97 (D698 will work)
D442	Deering, Mower, Ideal and Ideal Giant, 1898-03; Ideal Vertical, 1902-04 (D698 will work)
D698	Deering, Mower, Ideal and Ideal Giant, 1904-Since; Ideal Vertical, 1904-06; New Ideal and New Ideal Vertical, 1905-Since; New Ideal Giant, 1906-Since; Ideal "B," 1909-Since (Replaces F½ and D442)
286	Deering, Harvester, Junior and Improved, 1890-00; Ideal, 1898-09; New Ideal, 1908-Since
E769	Deering, Harvester, Junior and Improved, 1897-00; Ideal, 1898-02 (Center)
F99	Deering, Mower, Giant, Front Cut (2¼-in. Section), 1886-89
H	Emerson, Mower, Standard, 1889-94 (Removable Rail)
Z152	Emerson, Mower, Standard, Removable Rail for H Guard
M504	Emerson, Mower, Standard, 1908-10 (7 and 8 ft.) (Interchangeable with S or H)
M527	Emerson, Mower, New Standard, 1910-Since (4½ to 7 ft.) (Replaces M504)
55	Empire, Mower, (Seiberlings)
1064A	Header, Acme King Binder, 1895-Since, Double
B118A	Header, Acme, 1915-Since
41H	Header, Acme Randolph, 1894-01 (2-in. Double)
517	Header, Deering, Push Header and Binder, 1901-06 (Double) (Not Spokane and Portland, 1905-06)
J1	Header, McCormick, 1900-05 (Double)
J2	Header, McCormick, 1900-05 (Inner) (Triple)
JA1	Header, McCormick, 1906-Since, with Plate (Double)
JA2	Header, McCormick, 1906-Since, with Plat (Triple)
J192	Header, McCormick, 1900-06; Curved (Use JA192)
JA192	Header, McCormick, 1907-Since; Curved, with Plate
J194	Header, McCormick, 1900-06; Curved (Inner; use JA194)
JA194	Header, McCormick, 1907-Since; Curved (Inner, with Plate)
JB359	Header, McCormick Header and Binder, 1909-Since (Triple)
K235	Header, Plano Jones Steel, 1898-02; Straight (Double)
M52	Independent, Mower, 1910
N142	Independent, Binder, 1910
M66	Independent, Mower
1811	Johnston, Mower, Nos. 9 and 10, 1903-Since; No. 11, 1905-Since
77	Johnston, Reaper, Regular Continental, 1878-93; Improved Continental, 1891-Since
K307	Johnston, Harvester, Bonnie, 1900-09; Continental, L. H., 1900-09; Continental, R. H., 1901-Since
	Johnston, Header, see Headers.
A161	Keystone, Mower, 1904-Since
S220	Massey Harris, Binder, Nos. 3, 4 and 5
S220A	Massey Harris, Binder, 1922-Since
M765	Massey Harris, Nos. 20 and 21 Mowers, 1916 and since
M803	Massey Harris, No. 20 and 21 Mowers, 1920-Since
M462	McCormick, Mower, No. 4 and Big 4, 1892-97; New 4 and Vertical, 1896-Since; New Big 4, 1898-10
M804	McCormick, Mower, Little 4, 1900-01; Little Vertical, 1902-03
MA804	McCormick, Mower, New O. H. Plain and Vertical, 1910-Since
MB804	McCormick, Mower, New 4, Vertical, New Big 4, 1913-Since
L1	McCormick, Reaper, Folding Daisy, 1890-05; New Folding Daisy, 1905-10; Gear Drive, 1909-Since
LB1	McCormick, Reaper, Gear Drive Daisy, 1910-Since; (Replaces L1)
H495	McCormick, Harvester, Pipe Frame, 1888-01; Open Elevator, R. H., 1895-10; New Open Elevator, R and L. H., 1901-10
HA495	McCormick, Harvester, New Open Elevator, R. and L. H., 1910-Since (Replaces H495)
H917	McCormick, Harvester, Open Elevator, R. H., Foreign, 1894-01; New Open Elevator, R. and L. H., 1901-10.
	McCormick, Headers, see Headers.
MD989	McCormick, Mower, New 4 Vertical, New Big 4, 1913 (Raised plate)
PG5	Milwaukee, Mower, No. 6, 1892
PH5	Milwaukee, Mower, No. 6, 1893
PJ5	Milwaukee, Mower, Nos. 5 and 6, 1894
PK5	Milwaukee, Mower, Nos. 5 and 6, 1895-Since; No. 3, 1898
PK5S	Milwaukee, Mower, Nos. 5 and 6, 1895-Since; No. 3, 1898
A161	Milwaukee, Mower, (Keystone) Gear Drive, 1906-Since
S37	Milwaukee, Harvester, Steel, Junior, No. 10, 1889-Since
SN37	Milwaukee, Harvester, New No. 12, 1907-Since
	Minnie, see American Grass Twine.
628	Osborne, Mower, Nos. 3 and 4 and Big 4, 1885-92
K72	Osborne, Mower, Nos. 3 and 4 and Big 4, 1893-98
K280	Osborne, Mower, Columbia, B, C and D, 1896-05 (K223 Sec.)
K514	Osborne, Mower, Columbia, B, C and D, 1902-05; Osborne, Nos. 1, 2 and 3, 1903-Since; New Osborne Nos 2 and 3 1909-Since (for 5406 Sec.)
K790	Osborne, Mower, Nos. 1, 2 and 3, 1913-15
C40	Osborne, Reaper, No. 8, 1881-05; Columbia, 1894-Since

GUARDS—Continued

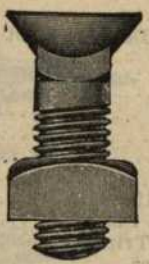
For Price, See Page 708

No.	NAME AND DESCRIPTION
C341	Osborne, Reaper, New Osborne, Gear Drive, 1909-Since; Columbia, Harvester, 1902-06, Osborne, Harvester, 1905-Since (Replaces D300)
D300	Osborne, Harvester, Columbia, 1895-02 (Replaced by C341)
B124	Osborne, Harvester and Binder
J568	Plano, Mower, Jones, Vertical, Big Vertical, and Vertical Junior; 1909-Since; Plain and Big Plain, 1909-Since.
H46	Plano, Mower, Jones Chain Drive, 1889-94
J110	Plano, Mower, Jones Chain Drive, 1894-98
J136	Plano, Mower, Jones Chain Drive, 1899-07; Vertical, Big Vertical and Vertical Junior, 1903-08; Plain and Big Plain, 1907-08
L67	Plano, Harvester, Jones Lever No. 1, 1896 only
L180	Plano, Harvester, Jones Lever Nos. 1 and 2, 1897-07
L630	Plano, Harvester, New Plano L. H., 1903-Since; R. H., 1905-Since
	Plano, Headers, see Headers.
	Standard, (see Emerson.)
03	Thomas, Mower, (Crown), New, 1898-Since
M8	Tiger, Mower
E	Wood, Mower, Tubular Steel (Two-Horse), 1890
A	Wood, Mower, Tubular Steel (Two-Horse), 1892-Since; Giant, 1891-Since
R	Wood, Mower, Admiral, 1907
L	Wood, Mower, Admiral and Vice-Admiral, 1908-Since; Admiral Giant, 1908-Since
H2620	Wood, Harvester, New Century, L. H., No. 3, 1903-Since; No. 5, 1905-Since; 8-foot, 1906-Since; No. 7, 1907-Since

GUARD BOLTS

No. 1 Key Head

No. 2 Round Head



No. 3 Round Head Square Shank

No. 4 Square Countersunk

No. 9 Carriage Head

Special Head

All Guard Bolts.....Each, $0.04½

Packed 25 in a box. Approx. weight per box 2¼ lbs.

Will fit accurately the Machines for which they are intended.

In ordering guard bolts give number or where no number is shown be particular to state the length, diameter and style of head, and also the name and number of the guard, thus avoiding all chance for error.

No.	NAME	For Guards No.	Size Bolt	Style Head
M216	Acme, Mower,	T2, T2B	⅜x1½	No. 3
M355	Acme, Mower,	T2, T2B	⅜x1¼	No. 3
V293	Acme, Binder	V43	⅜x1	No. 3
V294	Acme, Binder,	V43	⅜x1¼	No. 3
69A	Adriance, Mower,	564, 564X	⅜x1¼	No. 9
69	Adriance,	695	⅜x1¼	No. 4
3088	Adriance, Mower,	564B, 3087, 3087C, 3087D, 3087E	⅜x1 1/16	No. 3
3089	Adriance, Mower,	564B, 3087, 3087C, 3087D, 3087E	⅜x1¾	No. 3
	Adriance, Mower,	716	7/16x1½	No. 4 Special
N502	Adriance, Reaper,	N53	⅜x1⅝	No. 9
2091	Adriance, Reaper,	N53	⅜x1⅛	No. 9
69Sh.	Buckeye, Mower,	775X, 1004	½x1¼	No. 4
69Lg.	Buckeye, Mower,	775X, 1004	½x1½	No. 4
A5184	Champion, Mower,	A881	⅜x1 1/16	No. 3
A5283	Champion, Mower,	A881	⅜x1¼	No. 3
H277	Champion, Mower,	A465, A811, 2594, 3025	⅜x1 1/16	No. 3
H278	Champion,	A465, A811	⅜x1¼	No. 3
G195	Champion, Mower,	B629, 3025	⅜x1	No. 3
G283	Champion, Reaper,	B629	⅜x1	No. 3
A5961	Champion, Mower,	AA881, A5884	7/16x1 1/16	No. 9
A5962	Champion, Mower,	AA881, A5884	7/16x1 7/16	No. 9
	Crown, (see Thomas).			
Z5054	Dain, Mower,	Z5, ZIE	⅜x1½	No. 3
Z5060	Dain, Mower,	Z5, ZIE	⅜x1¼	No. 3
Z5294	Dain,	ZI	7/16x1¼	No. 3
Z5297	Dain,	ZI	7/16x1 1/16	No. 3
	Deere, see Dain.			
D2432	Deering, Mower,	F½, D442, D698	7/16x1 1/16	Special
D2433	Deering, Mower,	F½, D442, D698	7/16x1 7/16	Special
C1680	Deering, Reaper,	C260, C455	⅜x1 1/16	No. 9

GUARD BOLTS—Continued

For Price, See Previous Page

No.	NAME	For Guards No.	Size Bolt	Style Head
C1679	Deering, Reaper,	C260, C455	3/8x1 1/8	No. 9
C1704	Deering, Reaper,	C455	3/8x1 7/16	No. 9
H5483	Deering, Harvester,	286, H876	3/8x1 1/16	No. 4
H5607	Deering, Harvester,	E461 Clip	3/8x 7/8	Special
Z101	Emerson, Mower,	S. & H.	3/8x1 1/8	No. 3
	Emerson, Mower,	M504, M527	3/8x1 1/4	No. 3
	Emerson, Mower,	M504, M527 and Clip	3/8x1 1/2	No. 3
247Sh.	Johnston, Binder and Mower,	897, 77, A50	3/8x1 3/8	No 4
247Lg.	Johnston, Binder and Mower	897, 77, A50	3/8x1 5/8	No. 4
1830	Johnston, Mower,	1811	7/16x1 3/4	No. 3
1831	Johnston, Mower,	1811	7/16x1 1/4	No. 3
A200A	Keystone, Mower,	A161	7/16x1 1/4	No. 3
A201A	Keystone, Mower	A161	7/16x1 11/16	No. 3
M329	McCormick, Mower,	M253, M462	3/8x1 7/16	No. 3
M329½	McCormick, Mower,	M253, M462	3/8x1 7/16	No. 3
M805	McCormick, Mower,	MA989, M804	7/16x1 3/8	No. 3
M806	McCormick, Mower,	MA989, M804 and Clip	7/16x1 5/8	No. 3
L88	McCormick, Reaper,	L1, LB1, HA462, H462	7/16x1 7/16	No. 4
M57	McCormick, Reaper,	L1, LB1, HA462, H462	7/16x1 7/16	No. 4
H508	McCormick, Harvester,	H495, HA495	3/8x1 1/16	No. 3
H508½	McCormick, Harvester,	H495, HA495	3/8x1 7/16	No. 3
PG168	Milwaukee, Mower,	PG5, PH5, PK5, PJ5, PK5S	1 1/8x1 7/16	No. 1
A200A	Milwaukee, Mower,	A161	7/16x1 1/4	No. 3
A201A	Milwaukee, Mower,	A161	7/16x1 11/16	No. 3
SL885	Milwaukee, Harvester,	SM37, SN37	1 1/8x1 1/2	No. 9
TA288	Milwaukee,	TA5, TB5, SM37, SN37	3 3/32x1 1/8	No. 9
Q830	Milwaukee, Harvester,	S37	3/8x1 1/8	No. 9
Q831	Milwaukee, Harvester	S37	3/8x1 3/8	No. 9
	Osborne, Mower,	628, K72	7/16x1 1/4	No. 9
	Osborne, Mower,	628, K72	7/16x1 5/8	No. 9
2002	Osborne, Mower,	K514	7/16x1 3/4	No. 3
2002L	Osborne, Mower,	K790	7/16x1 7/8	No. 3
2003	Osborne, Mower,	K514, K280	7/16x1 7/16	No. 3
2098	Osborne, Mower,	K280, K529	7/16x1 5/8	No. 3
6678	Osborne, Mower,	K784, K790	7/16x1 3/8	No. 3
1052	Osborne, Reaper,	C40, C341	3/8x1	No. 9
1054	Osborne, Reaper,	C40, C341, D300	3/8x1 1/4	No. 9
1056	Osborne, Reaper,	C341, D300	3/8x1 1/2	No. 9
5048	Plano, Mower,	H46	3/8x1 3/8	No. 4
7043	Plano, Mower,	J136	3/8x1 1/2	No. 3
7044	Plano, Mower,	J136	3/8x1 7/16	No. 3
7587	Plano, Mower,	J386	7/16x1 5/8	No. 4
7600	Plano, Mower,	J386	7/16x1 3/8	No. 4
D2432	Plano, Mower	J568	7/16x1 7/16	No. 3
D2433	Plano, Mower,	J568	7/16x1 7/16	No. 3
5593	Plano, Harvester,	L180, L630	5/8x1 1/4	Machine
5594	Plano, Harvester,	L180, L630	5/8x1	Machine
	Standard, (see Emerson).			
1003S	Thomas, Mower,	03	3/8x1 7/16	No. 9
1003L	Thomas, Mower,	03	3/8x1 7/16	No. 9
3461	Wood, Mower,	E, H2620	3/8x1 3/8	No. 4
K3076	Wood,	L	7/16x1 5/32	No. 3
K3077	Wood,	L	7/16x1 11/32	No. 3
3462	Wood, Mower,	AEP, PP, 2355	3/8x1 5/8	No. 4
9390	Wood, Mower,	L. R.	7/16x1 3/8	No. 3
9391	Wood, Mower,	L. R.	7/16x1 3/4	No. 3
9573	Wood, Mower,	C538, R. L.	7/16x1 1/4	No. 3
9574	Wood, Mower,	C538, R. L.	7/16x1 5/8	No. 3

SHOE BOLTS

No. Z5038 to fit Dain-Deere.....Each, $0.10
All other numbers.....Each, $0.08

Will fit accurately the machines for which they are intended.

No.	Name	For	Size	Style Head
Z5037	Dain,	Cap Z30	½x1¼	No. 4
Z5038	Dain,	Cap Z31, Z32	5/8x2¼	No. 4
D2432	Deering,	G108, G215 Outer Shoes	7/16x1 7/16	Special
D2601	Deering,	Rear Caps D595, D984	½x2½	No. 4
D2606	Deering,	Shoe to Bar	½x1¾	No. 4
D2605	Deering,	Front Cap D826	3/8x1⅛	No. 9
D2599	Deering,	Front Cap D467	½x1 3/8	No. 9
M325	McCormick,	Outer Sole Bracket and Shoe Flat	½x1 3/8	.....
M325½	McCormick,	Caps M290, M652	½x1¾	.....
MA325	McCormick,	Cap MA652	½x2 1/16	No. 4
MB325	McCormick,	Cap MB652	½x1⅞	No. 4
M1097	McCormick,	Cap M1239	3/8x1 1/16	.....

MOWER PITMANS

All Mower Pitmans are Furnished Complete With Pitman Straps and Pitman Bolts.

No. 5004, to fit Massey Harris, complete with Pitman Bolts.....Each, $5.00
All other numbers, complete with Pitman Bolts.....Each, $2.40
Average weight each 4¾ lbs.

Will fit accurately the Machines for which they are intended.

No.	NAME AND DESCRIPTION
M243A	Acme, Pony Mower, 1900-Since
M245A	Acme, Hodges Mower, 1901-Since, with straps Nos. M142, M143, M144, M145
M624A	Acme, Giant Mower, 1903-Since, with straps Nos. M142, M143, M144, M145
3032B	Adriance, Nos. 7 and 8 Mowers, 1897-Since (with Fork 621)
3032H	Adriance, Nos. 7 and 8 Mowers, 1908-Since (Replaces 3032), with straps Nos. 600E, 601E, 605C
3232B	Adriance, Nos. 9 and 10 Mowers, 1898-Since (Replaces 3232) with straps Nos. 600E, 601E, 605C
	Crown, see Thomas.
Z5374	Dain or Deere, Mower, 1915-Since
Z5076	Dain, New Mower, 1895-1915 (Replaces Z3601) with straps Nos. Z220E, Z225E, Z226
Z5561	Deere, No. 1 Mower, 1920-Since
Z5662	Deere, No. 2 Mower, 1920-Since
Z5076	Deere, New Mower, 1895-1915 (Replaces Z3601) with straps Nos. Z220E, Z225E, Z226
D1471	Deering, Ideal and Giant Mowers, 1901-06, with straps D605, D606, D607
D2084	Deering, Ideal and Giant Mowers, 1907-Since; New Ideal and New Ideal Vertical, 1906-Since; Ideal "B," 1909-Since (Replaces D1471), with straps Nos. D893, D894, D607
D2907	Deering, Ideal, Giant Ideal, New Ideal "B," New Ideal, New Ideal V. L., New Ideal Giant Mowers, 1901-11 with straps Nos. D893, D894, D607
D2907	Deering, Ideal, Ideal Giant, Ideal O. H. '01-11, (D3008 Wood, 32 in.), with straps G210, 211, 212
Z397	Emerson, Standard Mowers, 1902-Since, with straps Nos. M417, M418, M416
Z176	Emerson, for 7 and 8 ft. Mower only, 1910-Since, with straps Nos. M417, M418, M416
M2052	Independent, Mower, 1910, with straps Nos. M147, M304, M315, M316
2334	Johnston, No. 12 Mower, 1911, with straps Nos. 2208C, 2209C, 2210
2228	Johnston, New No. 10 Mower, 1909-Since, No. 14, 19 13
2228C	Johnston, No. 14 Mower, 1913
1841	Johnston, Nos. 9 and 10 Mowers, 1903-Since (Replaces 1080), with straps Nos. 71½, 71¾, 216
M5004	Massey Harris, No. 15 Mower (Special Fork)
M318	McCormick, No. 4 Mower, 1888-97, with straps Nos. M147, M304, M316
M392	McCormick, Big 4, 1889-97; New 4 and Vertical, 1896-Since; New Big 4 Mowers, 1898-Since, with straps Nos. M304, M315, M147, M316
PN290	Milwaukee, No. 6 Mower, 1894-Since (Replaces PJ and PK290), with straps Nos. PM34, PM35, PL9, PL9½
PU290	Milwaukee, No. 5 Mower, 1894-Since (Replaces PR and PS290)
PV290	Milwaukee, No. 5 Mower, 1894-Since (Replaces PR and PS290), with straps Nos. PM34, PM35, PL9, PL9½
J9174	Osborne, Osborne Nos. 2 and 3 Mowers, 1907-Since (Replaces J9037), with straps Nos. 8131, 8132, 8130
J9439½	Osborne, New Osborne, Nos. 2 and 3 Mowers, 1910-Since, with straps Nos. 8131, 8132, 8130
7824	Piano, Jones Big Vertical, 1901-Since; Big Plain Mower, 1907-Since (Head J429)
7825	Piano, Jones Vertical, 1901-Since; Plain Mower, 1907-Since (Head J429), with straps Nos. J466, J467, J380
	Standard, (see Emerson).
1069	Thomas, New Mower, 1898-Since, 4½ and 5 ft. with straps Nos. 55, 56, 57
1070	Thomas, New Mower, 1898-Since, 6 and 7 ft., with straps Nos. 55, 56, 57
7170	Wood, Tubular Steel, 2-Horse Mower, 1900-03, with straps Nos. 2299, 2300, 2297, 2298
8954	Wood, Admiral Giant Mower, 1908-Since, with straps Nos. 2834, 2835, 2853, 2964

BINDER AND HEADER PITMANS

No. AH281A, to fit Acme Header.....Each, $2.00
No. J76, to fit McCormick Header.....Each, $0.56
All other numbers.....Each, $1.04
Average weight each 1½ lbs.

Will fit accurately the Machines for which they are intended.

No.	NAME AND DESCRIPTION
AH281A	Acme, Hodges Header, 1893-Since
2108	Adriance, Binder No. 2, R. H., 1897-Since
N859	Champion, Force Feed Binder, 1899-07
HZ9140	Deere, Light Draft, 1914
H1255	Deering, Ideal and New Ideal Binders, 1898-09
1984	Deering Header, 1904
2318	Deering, Header, No. 2, 1905
E1387	Deering, Jr., and Impd. Steel Binders, 1890-00
K118C	Johnston, Cont., R. H., 35¼ inches, 1911-Since
S1032	Massey Harris, No. 3 Binder
B763	McCormick, Impd. L. H. Binder, 1911
J76.	McCormick, Header, 1900, with 2 rivets in each end
V876	McCormick, Improved R. H. Binder, 1913
S713	Milwaukee, No. 10 Binder, 1888
SM844	Milwaukee, No. 12 Binder, 1902-10
J9048	Osborne, 1905-Since, 41 inches long.
J190	Osborne, Col., Binder, 1895-06.
6049	Piano, J. L. Nos. 1, 2, 3, 4, Binder, 1895-07

STEEL PITMANS FOR HARVESTERS

All numbers.....Each, $2.20

Average weight each 4¼ lbs.

Will fit accurately the Machines for which they are intended.

No.	NAME AND DESCRIPTION
H564	McCormick, Pipe Frame Harvester, 1890-91; R. H., Open Elevator, 1894-01
B135	McCormick, New Open Elevator, Harvester, 190[illegible]-Since

MOWER PITMAN WOODS

Finished and bored without straps, bolts or boxes.

All numbers.....Each, $0.62

Average weight each 1¼ lbs.

Will fit accurately the Machines for which they are intended.

No.	NAME AND DESCRIPTION
M242	Acme, Pony Mower, 1900-Since; Pitman M243A
M244	Acme, Hodges Mower, 1901-Since; Pitman M245A
M548	Acme, Giant Mower, 1903-Since; Pitman M624A
3033B	Adriance, Nos. 7 and 8 Mowers, 1897-Since; Pitman 3032B
3033H	Adriance, Nos. 7 and 8 Mowers, 1908-Since (Replaces 3033; Pitman, 3032H)
3233B	Adriance, Nos. 9 and 10 Mowers, 1898-Since (Replaces 3233); Pitman, 3232B
	Crown, Mower, 1900-Since
H504	Champion, Draw Cut Mower, 1898-Since
Z5340	Dain or Deere, Mower, 1915-Since
Z5050	Dain, New Mower, 1895-Since (Replaces Z3600 for Pit, Z5076 or Z3601)
Z5050	Deere, New Mower, 1895-Since (Replaces Z3600 for Pit, Z5076 or Z3601)
D1470	Deering, Ideal and Giant Mowers, 1901-Since; New Ideal Giant, 1906-Since; New Ideal and New Ideal Vertical, 1905-Since; Ideal "B," 1909-Since; Pitman, D1471 and D2084, (34 inches)
D3008	Deering, Ideal, Ideal Giant, Ideal O. H. '01-11, 33 in. Used with D2907 Pitman fitted with G210, 211, 212 Straps
Z182	Emerson, Standard Mowers, 1902-Since; 4½ and 6 ft., Pitman, Z397
Z181	Emerson, for 7 and 8 ft. Mowers only
M2202	Independent, 1910, Mower
2327	Johnston, No. 12 Mower, 1911
1098	Johnston, No. 9 and 10 Mowers, 1903-Since; Pitman, 1080 and 1841
2223	Johnston, New No. 10 Mower, 1909-Since; Pitman, 2228
M319	McCormick, No. 4 Mower, 1888-97; Pitman, M318
M393	McCormick, Big 4, 1889-97; New 4 and Vertical Mowers, 1896-Since; New Big 4, 1898-Since; Pitman, M392.
M945	McCormick, Automatic New 4; New Big 4 and Vertical Mowers, 1903-Since; Pitman, M944
PN301	Milwaukee, No. 6 Mower, 1894-Since; Pitman, PN290
PU301	Milwaukee, No. 5 Mower, 1894-Since; Pitman, PV290 or PU290
PV301	Milwaukee, No. 5 Mower, 1894-Since; Pitman, PV290 or PU290
M5003	Massey Harris, No. 15 Mower
J9174	Osborne, Nos. 2 and 3 Mowers, 1907-Since; Pitman J9174
J9439	Osborne, New Nos. 2 and 3 Mowers, 1910-Since; Pitman, J9439½
7817	Piano, Jones Vertical Mower, 6 and 7 ft., 1901-Since; Head, J429; Pitman, 7824
7818	Piano, Jones Vertical Mower, 4½ and 5 ft., 1901-Since; Head, J429; Pitman, 7825
	Standard, (See Emerson).
1071	Thomas, New Mower, 1898-Since, 4½ and 5 ft.; Pitman, 1069
1072	Thomas, New Mower, 1898-Since, 6 ft.; Pitman, 1070
	Wood, Tubular Steel, 2-Horse Mower, 1900-Since, Pitman, 7170
	Wood, Admiral Giant Mower, 1908-Since; Pitman, 8954
	Wood, Vertical Lift Mower, No. 2, 1915-Since for Pitman K3434)

PITMAN LATCHES.

All numbers.....Each, $0.10

Will fit accurately the Machines for which they are intended.

No.	NAME AND DESCRIPTION.
V769	McCormick, for V876, Pitman R. H. Binder, 1913
B764	McCormick, for B763, Pitman L. H. Binder, 1911

PITMAN BOXES AND BUSHINGS

ACME T 12

CHAMPION A 748-9

EMERSON 1-2

McCORMICK M317

ACME BUSHING T 12

CROWN 25

EMPIRE 425

McCORMICK H.A. 565

ADRIANCE 61D

DEERING D 608

JOHNSTON 2207 C

OSBORNE K 361

BUCKEYE 88

DEERING D 711

JOHNSTON 1011

OSBORNE K 826

CHAMPION A 747

DEERING D 334

KNOWLTON A

PLANO J 99

CHAMPION A 828

D 711 BUSHING

KEYSTONE A163

BUSHING J100

CHAMPION A 891

D334 BUSHING

MILWAUKEE P.J. 50

WOOD 2027

CHAMPION A A1018

DAIN Z 162

BUSHING P.H. 173

WOOD A 2301

CHAMPION A1133

EMERSON M 472

MINNIE M 256

WOOD A 2941

Will fit accurately the Machines for which they are intended.

No.	NAME AND DESCRIPTION.	Each
M65	Acme (and Cap 67), Acme Mower, 1896-97 (also Esterly Mower)	1.20
M575	Acme, New Hodges Mower, 1901-Since; Giant Mower, 1903-Since (Replaces T12)	.85
T12	Acme, Pony Hodges and Giant Mowers prior to 1901	.75
T51	Acme, Bushing for M575, T12, T12B	.60
61D	Adriance, Nos. 7, 8, 9 and 10 Mowers, 1897-07 (Replaced by 61F)	1.00
61F	Adriance, Nos. 7 and 8 Mowers, 1908-Since (Replaces 61D)	.8
61K	Adriance, Nos. 9 and 10 Mowers, 1898 and Since	
88	Buckeye, Akron Light Mower, 1888-Since (half box)	

PITMAN BOXES AND BUSHINGS—Continued

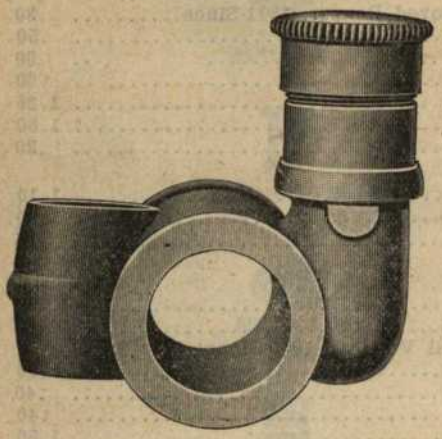
No.	NAME AND DESCRIPTION.	Each
441	Champion, Mower	.40
A72	Champion, Bushing, 1901-09	.60
A100	Champion, (and A101), Haymaker Mower, 1895-01	.30
A747	Champion, Draw Cut Mower, 1897-02	.80
A748½	Champion, (A748 and A749), Draw Cut Mower, 1897-02; Folding Bar Reaper, 1899-01	.30
B683½	Champion, (A748 and B683), Draw Cut Mowers, 1903-07; New and Big Draw Cut Mowers, 1905-Since; Vertical Lift Mowers, 1904-Since; Folding Bar Reaper, 1902-10; Improved Reaper, 1911-Since	.30
A828	Champion, Draw Cut Mower, 1903-04	.50
A891	Champion, Draw Cut, 1905-06; New Draw Cut, 1905-06	.60
A1018	Champion, All Draw Cuts and Vertical Lift Mowers, 1906-08; Iron	.60
AA1018	Champion, All Draw Cut and Vertical Lift Mowers, 1909-Since; Brass	1.25
A1133	Champion, Improved and Vertical Mowers, 1909-Since (Pitman A5886)	1.50
A1134	Champion, Improved and Vertical Mowers, 1909-Since (Shell)	.30
25	Crown, Mower, No. 6 (Iron) (Brass) or Malleable	1.10
Z162	Dain, New Mower, 1908-Since	1.00
Z95	Dain or Deere, Bushing (Brass) for Z162 and Z205	.45
	Deere, see Dain.	
D461	Deering, Ideal and Giant Mowers, 1898-00	.90
D608	Deering, Ideal and Giant Mowers, 1901-06; Vertical Lift Mower, 1904-06	1.00
D711	Deering, Ideal and Giant Mowers, 1906-Since; New Ideal and New Ideal Vertical, 1905-Since; New Ideal Giant, 1906-Since; Ideal "B," 1909-Since (will work for D712), Foreign	1.00
G262	Deering, Bushing (Brass) for G191	.40
D1849	Deering, Bushing for D711-D608 Pitman Box	.40
D334	Deering, Ideals and New Deering (Steel Pit.), 1893-04	1.50
D335	Deering, Bushing for D334	.50
1 & 2	Emerson, All Standard Mowers, 1899-Since	1.00
M202	Emerson, All Standard Mowers, 1900-05 (Wood Pit.) (M472 will work)	.70
M472	Emerson, All Standard Mowers, 1906-Since (Wood Pit.) (Replaces M202)	.70
65	Esterly (and M67)	1.20
M24	Independent, Mower, 1910.....(Pit.)	.80
257	Johnston, No. 6 Mower, 1890-Since; Mayflower, 1890-99 Brass	.70
1011	Johnston, Nos. 9 and 10 Mowers, 1903-Since	.60
2207	Johnston, New No. 10 Mower, 1909-Since (Pitman, 2228)	.60
2207C	Johnston, No. 10 Mower, 1912	.70
2207E	Johnston, Nos. 12 and 14 Mower	.85
A	Knowlton	1.00
A163	Keystone, Milwaukee Gear Drive Mower, 1906	.90
M574	Massey Harris, No. 15 Mower	2.00
V98	Massey Harris, Bushing for M574	.75
M317	McCormick, All Mowers, 1888-Since	.80
M317B	McCormick, All Mowers, 1910-Since (with Brass Bushing)	.90
MB1124	McCormick, Bushing (Brass) for MD317	.40
HA565	McCormick, New Open Elevator Harvester, R. and L. H., 1901-Since	.60
M33	McCormick, (or T) Corn Binder	1.00
M317½	McCormick, Bushing for M317	.40
PH173	Milwaukee, Bushing for P. J. 50	.50
PJ50	Milwaukee, Nos. 3, 5 and 6 Mowers, 1899-Since; Chain Drive Reaper, 1900-Since	.80
A163	Milwaukee, Keystone Chain Drive Mower, 1906-Since	.90
M256	Minnie, Mower	1.20
M50	Minnesota, Malleable Box only	.60
M50½	Minnesota, No. 1 Mower (Malleable Box No. 50 and Brass Bushing No. 51), complete	1.50
M51	Minnesota, Bushing for M50½ (Brass)	.90
Big 4	Osborne, Mower, Two Halves	1.00
Big 4	Osborne, Mower, Solid	.70
K278	Osborne, Columbia, B, C and D Mowers, 1896-05 (Steel Pitman) (will work for K361)	.70
K361	Osborne, Columbia, B, C and D Mowers, 1898-9 (2 Halves)	.70
K826	Osborne, Nos. 2 and 3 Mowers, 1905-Since; New Osborne Nos. 2 and 3 Mowers, 1909	.80
K944	Osborne, New Osborne, Nos. 2 and 3 Mowers, 1910-Since	.90
KA1158	Osborne, Mower, No. 3 and New No. 2, 1913-15 (will work for K1158, K944, K826)	.80
J99	Plano, Jones Chain Mower, 1894-07; Jones Gear Mower, 1898-01; Vertical and Big Vertical, 1901-Since; Plain and Big Plain, 1907-Since	.80
J100	Plano, Bushing for J99	.50
	Standard, (see Emerson).	
25	Thomas, New Mower, 1898-Since	1.10
1785	Wood, All Tubular Steel, 2-Horse Mowers, 1891-00	1.10
A2301	Wood, All Tubular Steel, 2-Horse Mowers, 1901-09	1.30
2941	Wood, Admiral and Admiral Giant Mowers, 1907-Since (Use for AK124)	1.15
2941A	Wood, Admiral, 1907-Since	1.15
291½	Wood, Enclosed Gear, 1889	.90
2027	Wood, Tubular Steel Mower	1.10
AK367	Wood, Vertical Lift Mower, 1915-Since	1.30

Average weight each ⅞ lb.

HARD OIL PITMAN BOXES

AUTOMATIC FEED

Made of pressed steel.
This is the most practical hard oil Pitman Box on the market. Give perfect satisfaction and will fit accurately the machines for which they are intended.



We furnish Only the Following Styles with Automatic Feed Cup.

No.	Name	Each	No.	Name	Each
M575B	Acme	1.10	2207H	Johnston	1.00
61FH	Adriance	1.10	2207EH	Johnston	1.15
61KH	Adriance	1.10	2207CH	Johnston	1.00
61DH	Adriance	1.40	M317H	McCormick	.90
25H	Crown	1.00	MD317H	McCormick	1.10
25BH	Crown	1.40	PJ50H	Milwaukee	1.40
Z205H	Dain	1.00	K826H	Osborne	1.20
Z162H	Dain	1.40	K944H	Osborne	1.20
Z162H	Deere	1.40	KA1158H	Osborne	1.20
D608H	Deering	1.25	J99H	Plano	1.20
D711H	Deering	1.25	M202H	Standard	1.20
G191	Deering	1.25	25H	Thomas	1.00
M526	Emerson	1.20	2941H	Wood	1.50
M202H	Emerson	1.20	277H	Wood	1.20
M472H	Emerson	1.20	AK367H	Wood	1.50
M24H	Independent	.90			

Average weight each 1 lb.

PITMAN SPRINGS

Will fit accurately the Machines for which they are intended.

No.	NAME AND DESCRIPTION	Each
M470	Acme, for all Pitmans 1901-Since	$0.10
601½A	Adriance, for 573C, 3032H and 3232B Pitmans (Flat)	$0.12
557	Buckeye, (Worcester), for 787B and 787C Pitmans (Flat)	$0.10
H441	Champion, for H505 Pitman (Spiral)	$0.09
H444	Champion, with H442 Pitman Bolt (Flat)	$0.09
H610	Champion, for H615 Pitman (Spiral)	$0.09
H624	Champion, with H609 Bolt (Flat)	$0.09
A5705	Champion, for A5834 Bolt (Pitman A5886) (Flat)	$0.12
	Crown, (See Thomas).	
59S	Dain, for Z3601 or Z5076 Pitman (Wire) (Kf. End)	$0.06
49S	Deere and Dain, Old Style for Z3601 Pitman (Flat)	$0.12
	Deere, see Dain.	
D1151	Deering, for D1153, D1471 and D1772 Pitman (Flat)	$0.12
D2036	Deering, for D2084 and J1302 Pitman (Flat)	$0.12
Z660	Emerson, for Z397 and Z396 (Pitman (Flat), (Kf. End)	$0.12
Z661	Emerson, for Z397 and Z396 Pitman (Flat), Bx. End)	$0.12
1016	Johnston, for 726, 727, 1080, 1841 and 2228 Pit., Bx. End (Flat)	$0.12
1017	Johnston, for 726, 727, 1080, 1841 and 2228 Pit., Kf. End (Flat)	$0.12
M484	Keystone, Milwaukee, for A256 Pitman, Kf. End (Flat)	$0.09
M484½	Keystone, Milwaukee, for A256 Pitman, Bx. End (Flat)	$0.09
M1704	Massey Harris, for M5004, Knife End	$0.10
M1705	Massey Harris, for M5004, Box End	$0.10
M484	McCormick, for M318, M392, M914 and L341 Pitman, Kf. End (Flat)	$0.09
M484½	McCormick, for M318, M392, M914, M341 and M944 Pitman, Bx End (Flat)	$0.09
PG170	Milwaukee, for PN290 and PV290 Pitman (PJ9 and PL9 Strap) (Wire) Bx. End	$0.06
PG171	Milwaukee, for PN290 and PV290 Pitman (PJ35 and PM35 Strap) (Wire) Kf. End	$0.06
7191	Osborne, for J9035, J9175 and J9174 Pitman, Bx. End (Flat)	$0.09
7192	Osborne, for J9035, J9175 and J9174 Pitman, Kf. End (Flat)	$0.09
9847	Osborne, for J9439½ Pitman, Bx. End (Flat)	$0.09
9848	Osborne, for J9439½ Pitman Kf. End (Flat)	$0.09
7439	Plano, for 7392 Pitman (J103 Nut) (Flat)	$0.06
7440	Plano, for 7394, 7824 and 7825 Pitman (J147 and J363 ut), Kf. End (Wire)	$0.06
	Standard, (see Emerson).	
1112	Thomas, for 1069 and 1070 Pitman, Kf. End (Flat)	$0.09
5444	Wood, for 5490 Pitman (Flat)	$0.12
7175	Wood, for 7170, 8225, 8210 and 8965 Pitman (Flat)	$0.12
8924	Wood, for 7170 and 8965 Pitman (Flat)	$0.12
K3440	Wood, for K3434 Pitman (Flat)	$0.72

PITMAN STRAPS OR CLASPS

ACME M 142

ACME M 143

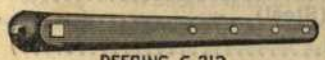
ACME M 144

ACME M 145

DEERING D 893

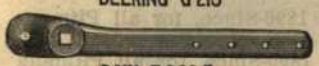
DEERING D 894

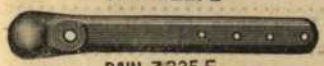
DEERING D 607


DEERING G 212

DEERING G 211

DEERING G 210


DAIN Z 220 E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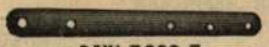
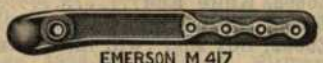
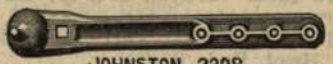

DAIN Z 226 E

EMERSON M 416

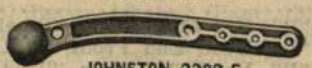

EMERSON M 417

EMERSON M 418


JOHNSTON 2208

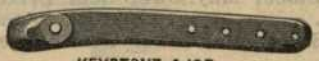
JOHNSTON 2209

JOHNSTON 2210


JOHNSTON 2209 C

JOHNSTON 2208 C

KEYSTONE A 181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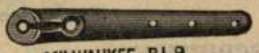
KEYSTONE A 183


MILWAUKEE PL 9

MILWAUKEE PL 9½

MILWAUKEE PM 34

MILWAUKEE PM 35

McCORMICK M 315

McCORMICK M 316

McCORMICK M 147

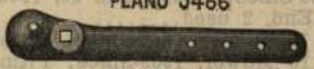
McCORMICK M 304

OSBORNE 8130

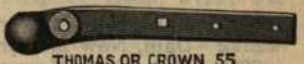
OSBORNE 8131

OSBORNE 8132

PLANO J 466

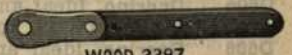

PLANO J 467

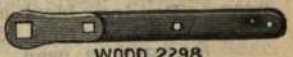
PLANO J 380


THOMAS OR CROWN 55

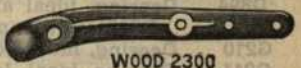
THOMAS OR CROWN 56

THOMAS OR CROWN 57


WOOD 2297

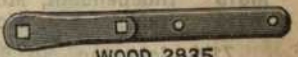

WOOD 2298

WOOD 2299


WOOD 2300

WOOD 2964

WOOD 2834


WOOD 2835

WOOD 2853

WOOD 2306

No. M557, to fit Massey Harris.....Each, $3.00
All other numbers for Box End.....Each, $0.26
All other numbers for Head End.....Each, $0.42

Average weight each ¾ lb.

Will fit accurately the Machines for which they are intended.

No.	NAME AND DESCRIPTION.
M142	Acme, Hercules, 1898-00; Pony and Hodges Mowers, 1900-Since; Giant 1903-Since; for Pitmans M410, M243, M245, M624, Head End, Rear Steel..
M143	Acme, Hercules, 1898-00, Pony and Hodges, Mowers, 1900-Since; Giant 1903-Since, for Pitmans, M410, M423, M245, M624, Head End, Front Steel.....
M144	Acme, Hercules, 1898-00, Pony and Hodges Mowers, 1900-Since; Giant, 1903-Since, for Pitmans M410, M243, M245, M624, Box End, Lower.....
M145	Acme, Hercules, 1898-00, Pony and Hodges Mowers, 1900-Since; Giant, 1903-Since, for Pitmans M140, M243, M245, M624, Box End, Upper.....
M144A	Acme, Box End, Lower (Steel), replaces M144 (Mall.)
M145A	Acme, Box End, Lower (Steel), replaces M145 (Mall.)
600A	Adriance, No. "H"—Nos. 7 and 8 Mowers, 1897-07; Nos. 9 and 10, 1898-07, Steel, for Pitman 573G, 3032, 3032B, 3232 and 3232B Head End, Rear, (Replaced by 600D)..
601A	Adriance, No. "H"—Nos. 7 and 8 Mowers, 1897-07; Nos. 9 and 10, 1898-07, Steel, for Pitmans 573G, 3032, 3032B, 3232 and 3232B, Head End, Front, (Replaced by 601D)
605A	Adriance, No. "H"—Nos. 7 and 8 Mowers, 1898-07; Nos. 9 and 10, 1898-07, Steel, for Pitmans 573G, 3032, 3032B, 3232 and 3232B, Box End, 2 used (Replaced by 605B).....
600D	Adriance, Nos. 7, 8, 9 and 10 Mowers, 1908-Since, Steel, for Pitmans 3032H and 3232B, Head End, Rear (Replaces 600A)
601D	Adriance, Nos. 7, 8, 9 and 10 Mowers, 1908-Since, Steel, for Pitmans 3032H and 3232B, Head End, Front (Replaces 601A)..
605B	Adriance, Nos. 7, 8, 9 and 10 Mowers, 1908-Since, Steel, for Pitmans 3032H and 3232B, Box End, 2 used (Replaces 605A)..
600E	Adriance, Nos. 7, 8, 9 and 10 Mowers, 1912-Since, Steel for Pitmans 3032H and 3232B, Head End, Rear (Replaces 600D)..
601E	Adriance, Nos. 7, 8, 9 and 10 Mowers, 1912-Since, Steel, for Pitmans 3032H and 3232B, Head End, Front (Replaces 601D)
605C	Adriance, Nos. 7, 8, 9 and 10 Mowers, 1912-Since, Steel, for Pitmans 3032H and 3232B, Box End, 2 used (Replaces 605B)..
55	Crown, Steel, Head End.....
56	Crown, Steel, Head End.....
57	Crown, Steel, Box End.....

PITMAN STRAPS OR CLASPS—Continued

For Price, See Previous Page

No.	NAME AND DESCRIPTION
Z220E	Dain, New Mower, 1895-Since, Steel; Pitman, Z5076, Head End, Rear
Z225E	Dain, New Mower, 1895-Since, Steel; Pitman, Z5076, Head End, Front, Replaces Z224
226E	Dain, New Mower, 1895-Since, Steel; Pitman, Z5076, Box End, 2 used
Z392	Deere, Mower, No. 1 and 2, Big Pitman Z5661, Z5662, Knife End
Z393	Deere, Mower, No. 1 and 2, Big Pitman Z5661, Z5662, Knife End
Z516	Deere, Mower, No. 1 and 2, Big Pitman Z5661, Z5662, Box End (will interchange with Z226)
D464	Deering, Ideal and Giant Mowers, 1898-00; Pitman, D1153, Head End, Front
D465	Deering, Ideal and Giant Mowers, 1898-00; Pitman, D1153, Head End, Rear
D470	Deering, Ideal and Giant Mowers, 1898-00; Pitman, D1153, Box End, 2 used (Steel)
D605	Deering, Ideal and Giant, 1901-08; New Ideal, New Ideal Vertical, 1905-08; New Ideal Giant, 1906-08, Steel (Use D893), for Pitman D1471, Head End, Front
D606	Deering, Ideal and Ideal Giant, 1901-07; New Ideal, New Ideal Vertical, 1905-06; New Ideal Giant, 1906, Steel (Use D722 or D894), for Pitman D1471, Head End, Rear
D607	Deering, Ideal and Ideal Giant, 1901-Since; Ideal Vertical, 1904-06; New Ideal, New Ideal Vertical, 1905-Since; New Ideal Giant, 1906-Since; Ideal "B," 1909-Since, Steel, for Pitmans D1471, D1772, D2084, Box End, 2 used
D722	Deering, Ideal and Ideal Giant, 1907-08; New Ideal, New Ideal Giant, New Ideal Vertical, 1907-08, (Steel), (Use D606 or D894), for Pitman D2084, Head End, Rear
D893	Deering, Ideal and Ideal Giant and New Ideal and New Ideal Giant, 1909-Since, Steel (Replaces D605); Pitman, D2084, Head End, Front
D894	Deering, Ideal and Ideal Giant and New Ideal and New Ideal Giant, 1909-Since, Steel (Replaces D606-D722); Pitman, D2084, Head End, Rear
G210	Deering, Ideal, Ideal Giant, Ideal O. H., New Ideal "B", Box End, '01-'14 (Steel)
G211	Deering, Ideal, Ideal Giant, Ideal O. H., New Ideal "B", Head End Front, '01-'14 (Steel)
G212	Deering, Ideal, Ideal Giant, Ideal O. H., New Ideal "B", Head End Rear, '01-'14 (Steel)
M416	Emerson, New Standard, 1902-Since; Pitman, Z397 and Z396; Box End, 2 used
M417	Emerson, New Standard, 1902-Since; Pitman, Z397, Head End, Front
M418	Emerson, New Standard, 1902-Since; Pitman Z397, Head End, Rear
M147	Independent, Mower, 1910, Head End Front (Pitman M2052) (Steel)
M304	Independent, Mower, 1910, Head End Rear (Pitman M2052) (Steel)
M315	Independent, Mower, 1910, Box End Upper (Pitman M2052) (Steel)
M316	Independent, Mower, 1910, Box End Lower (Pitman M2052) (Steel)
71½	Johnston, No. 6, 1890-Since; Nos. 9 and 10, 1903-Since; Mayflower Gear Drive, 1890-Since, for all Pitmans except 2228, Head End, Front
71¾	Johnston, No. 6, 1890-Since; Nos. 9 and 10, 1903-Since; Mayflower Gear Drive, 1890-Since, for all Pitmans except 2228, Head End, Rear
216	Johnston, No. 6, 1890-Since; Nos. 9 and 10, 1903-Since; Mayflower Gear Drive, 1890-Since, for all Pitmans except 2228, Box End, 2 used
2208	Johnston, New No. 10 Mower, 1909-Since; Pitman, 2228, Head End, Rear
2209	Johnston, New No. 10 Mower, 1909-Since; Pitman, 2228, Head End, Front
2210	Johnston, New No. 10 Mower, 1909-Since; Pitman, 2228, Box End, 2 used
2208C	Johnston, Mower, Nos. 12 and 14, 1911-13, Head End Rear, (Pitmans Nos. 2334 and 2228C) (Mall.)
2209C	Johnston, Mower, Nos. 12 and 14, 1911-13, Head End Front, (Pitmans Nos. 2334 and 2228C) (Mall.)
A181	Keystone, Milwaukee Gear Drive, 1906-Since; Pitman, A256, Box End, 2 used
A182	Keystone, Milwaukee Gear Drive, 1906-Since; Pitman, A256, Head End, Front
A183	Keystone, Milwaukee Gear Drive, 1906-Since; Pitman, A256, Head End, Rear
M1701	Massey Harris, Mower, No. 15, Knife End (Pitman 5004) (Steel)
M1702	Massey Harris, Mower, No. 15, Knife End (Pitman 5004) (Steel)
M557	Massey Harris, Mower, No. 15, Thread Fork (Pitman 5004), Special
M147	McCormick, No. 4 and Big 4, 1887-97; Little 4, 1889-93; New 4 and Vertical, 1896-Since; New Big 4, 1898-Since, Steel, for Pitmans M318, M337, M392, M914, Head End, Front
M304	McCormick, No. 4 and Big 4, 1887-97; Little 4, 1889-93; New 4 and Vertical, 1896-Since; New Big 4, 1898-Since, Steel, for Pitmans M318, M337, M392, M914, Head End, Rear
M315	McCormick, No. 4 and Big 4, 1887-97; Little 4, 1889-93; New 4 and Vertical, 1896-Since; New Big 4, 1898-Since, Steel; also Automatic, 1903-Since, for Pitmans M318, M337, M392, M914, M944, Box End, Upper
M316	McCormick, No. 4 and Big 4, 1887-97; Little 4, 1889-93; New 4 and Vertical, 1896-Since; New Big 4, 1898-Since, Steel; also Automatic, 1903-Since; for Pitmans M318, B337, M392, M914, M944, Box End, Lower
PJ34	Milwaukee, Nos. 5 and 6 Mowers, 1897-01; Pitman, PN290 and PV290; Head End, Rear
PJ35	Milwaukee, Nos. 5 and 6 Mowers, 1897-01; Pitman, PN290 and PV290; Head End, Front
PL9	Milwaukee, Nos. 5 and 6, 1884-Since, and Chain Drive Reaper, 1900-Since; Pitman, PN290 (Replaces PJ9 and PK9); Box End Upper
PL9½	Milwaukee, Nos. 5 and 6, 1894-Since, and Chain Drive Reaper, 1900-Since; Pitman, PN290 (Replaces PJ9½ and PK9½), Box End, Lower
PM34	Milwaukee, Nos. 5 and 6, 1894-Since, and Chain Drive Reaper, 1900-Since; Pitman, PN290 (Replaces PJ34 and PK34); Head End, Rear
PM35	Milwaukee, Nos. 5 and 6, 1894-Since, and Chain Drive Reaper, 1900-Since; Pitman, PN290 (Replaces PJ35 and PK35); Head End, Front
8130	Osborne, Nos. 1, 2 and 3 Mowers, 1907-Since; New, Nos. 2 and 3 Mowers, 1909-Since; Pitmans, J9174 and J9439½ (Replaces X750), Box End, 2 used (Steel)
8131	Osborne, Nos. 1, 2, and 3 Mowers, 1907-Since; New, Nos. 2 and 3 Mowers, 1909-Since; Pitmans, J9174 and J9439½ (Replaces K623); Head End, Rear (Steel)
8132	Osborne, Nos. 1, 2 and 3 Mowers, 1907-Since; New, Nos. 2 and 3 Mowers, 1909-Since; Pitmans, J9174 and J9439½ (Replaces K624); Head End, Front (Steel)
J380	Piano, Jones Chain Drive, 1901-07; Jones Vertical and Big Vertical, 1901-Since; Plain and Big Plain, 1907-Since; Jones Reaper, 1901-06 (Replaces J357 and J358); Pitman, 7824 and 7825; Head, J429; Pitman, 2625, Steel; Box End, 2 used

PITMAN STRAPS OR CLASPS—Continued

For Price, See Page 717

No.	NAME AND DESCRIPTION
J466	Plano, Jones Vertical and Big Vertical, 1901-Since; Plain and Big Plain, 1907-Since; Head, J429; Pitmans, 7824 and 7825, Steel; Head End, Front
J467	Plano, Jones Vertical and Big Vertical, 1901-Since; Plain and Big Plain, 1907-Since; Head, J429; Pitmans, 7824 and 7825, Steel; Head End, Rear
J120	Plano, Chain and Chain Jr., 1894-99, Mal., Box End, Rear
J121	Plano, Chain and Chain Jr., 1894-99, Mal., Box End, Front
	Standard, (see Emerson).
55	Thomas, New Mower, 1898-Since, Steel; Pitmans, 1069 and 1070; Head end, Rear
56	Thomas, New Mower, 1898-Since, Steel; Pitmans, 1069 and 1070; Head End, Front
57	Thomas, New Mower, 1898-Since, Steel; Pitmans, 1069 and 1070; Box End, 2 used
2297	Wood, Tubular Steel, 1900-07; Giant, 1901-Since; Light, Enclosed Gear Reaper, 1900-Since; Pitmans, 7170, 8225, 8210, 6654; Box End, Upper
2298	Wood, Tubular Steel, 1900-07; Giant, 1901-Since; Light, Enclosed Gear Reaper, 1900-Since; Pitmans, 7170, 8225, 8210, 6654; Box End, Lower
2299	Wood, Tubular Steel, 1900-03; Giant, 1901-Since; Light, Enclosed Gear Reaper, 1900-Since; Pitmans, 7170, 8210, 6654, Head End, Rear
2306	Wood, Tubular Steel Mower, 1904-Since (Replaces 2299 on Pitman 7170); Pitman, 8225; Head End, Rear
2300	Wood, Tubular Steel, 1900-Since; Giant, 1901-Since; Light Enclosed Gear Reaper, 1900-Since; Pitmans, 7170, 8225, 8210, 6654; Head End, Front
2834	Wood, Tubular Steel, 1908-Since; Admiral, 1907 Since; Giant, 1908-Since; Pitmans, 8965, 8954, 8225, 9539; Box End, Upper
2835	Wood, Admiral, 1907-Since, Admiral Giant, 1908-Since, Pitmans 8965, 8964, 9539, Box End Lower (Mall.)
2853	Wood, Admiral, 1907-Since; Admiral Giant, 1908-Since; Pitmans, 8965, 8954, 9539; Head End, Front
2964	Wood, Admiral, 1909-Since; Admiral Giant, 1908-Since; Pitmans, 8965 and 8954; Head End, Rear
K3433	Wood, Vertical Lift, No. 2 Mower, 1915-Since; Pitmans, K3434 B. E. 2 used (Steel)
K3438	Wood, Vertical Lift, No. 2 Mower, 1915-Since; Pitmans, K3434 H. E. Rear (Steel)
K3439	Wood, Vertical Lift, No. 2 Mower, 1915-Since; Pitmans, K3434 H. E. Front (Steel)

PITMAN BOLTS

All numbers to fit Champion.....Each, $0.26
All other numbers.....Each, $0.12
Extra Nuts and Washers.....Each, $0.06

Will fit accurately the Machines for which they are intended.

No.	NAME AND DESCRIPTION
M413B	Acme, 7/16x2½ Cge. R. H. Frk. Nut, M164A, Box End, all Mowers, 1901-Since.
M414	Acme, 7/16x2½ Cge. L. H. Rat. Nut (M165), Kf. End, All Mowers, 1898-Since
602A	Adriance, 7/16x2⅜ Cge. L. H. Frk. Nut Kf. End, Adriance, Nos. H, 7, 8, 9 and 10 Mowers, 1897-07
602B	Adriance, 7/16x2⅜ Cge. R. H. Notched Nut Kf. End, Nos. 7 and 8 Mowers, 1908-Since
607A	Adriance, ⅜x2⅝ Mch. Frk. Nut, Bx. End, Adriance, Nos. H, 7, 8, 9 and 10 Mowers, 1897-Since
A96	Champion, ½x2⅜ Spec. Rat. Nut, Kf. End, Draw Cut and Haymaker Mowers, 1895-99
H442	Champion, ½x2⅞ Spec. Rat. Nut, Kf. End, Draw Cut and Haymaker Mowers, 1899-02
H609	Champion, 7/16x3 Spec. Rat. Nut, Kf. End, Draw Cut Improved and Vert. Mowers, 1909-Since
A5834	Champion, 7/16x3½ Spec. Rat. Nut (A1153), Kf. End and Haymaker Mowers, 1903-Since
H632	Champion, ½x2¼ Cge. Horn Nut Draw Cut and Vertical Mowers, 1899-12
A800	Champion, Pit. Bolt Washers
1004	Crown, ⅜x2½ Horn Nut, Knife End
1005	Crown, 7/16x3 Horn Nut, Box End
	Dain, (see Deere).
Z5040	Deere, 7/16x2¾ Cge. Rat. Nut, Kf. End, New Mower, 1895-Since (Rep. Z2504) (J363 Plano Rat. Nut will work)
Z5035	Deere, ⅜x2¾ Mch. Frk. Nut, Bx. End, New Mower 1895-Since (Rep.Z2510) (D204 Deer'g Horn Nut will work)
Z5961	Deere, Mower, 7/16x2¾ Horn Nut, Box End, No. 1 and 2 Big Mower.
Z5040	Deere, Mower, 7/16x2¾ Hex. Nut, Knife End, No. 1 and 2 Big Mower
D2590	Deering, ⅜x2⅜ Cge. R. H. Rat. Nut, D468, Kf. End Ideal and Ideal Giant Mowers, 1898-06
D2592	Deering, ⅜x2⅝ Mch. Frk. Nut, Bx. End, Ideal, Ideal Giant Mowers, 1901-Since; New Ideal, New Ideal Vertical, 1905-Since; New Ideal Giant, 1906-Since; Ideal "B," 1909-Since; Ideal Vertical Lift, 1904-06
D2591	Deering, ⅜x2½ L. H. Cge. Rat. Nut (D816), Kf. End, Ideal and Ideal Giant Mowers, 1907-Since; New Ideal and New Ideal Vertical, 1905-Since; New Ideal Giant, 1906-Since; Ideal "B," 1909-Since
D3078	Deering, 7/16x2⅞, Mch., Lock Nut (F80) Box End, New Ideal "B" Mowers
D3079	Deering, 7/16x2¾, Cge., L. H. Thread Nut (G209), Kf. End, New Ideal "B" Mowers
Z381	Emerson, 7/16x2½ Cge. Hex. Rat. Nut, Kf. End, All Standard Mowers, 1899-Since
Z382	Emerson, ⅜x3⅜ Cge. Hex. Rat. Nut, Bx. End, All Standard Mowers, 1899-Since
229	Johnston, 7/16x2¼ Cge. Frk. Nut, Kf. End, Nos. 6, 8 and 9 and Mayflower Mowers, 1890-00
231½	Johnston, ⅜x3 Cge. Frk. Nut, Bx. End Nos 6, 8 and 9 and Mayflower Mowers, 1890-00
768	Johnston, ⅜x3¼ Cge. Rat. Nut, Bx. End, No. 6 Mowers, 1900-Since
1018	Johnston, ⅜x3½ Cge. Rat. Nut, Bx. End, Nos. 8, 9 and 10 Mowers, 1900-Since
2251	Johnston, ⅜x2½ Cge. Rat. Nut, Kf. End, New No. 10 Mowers, 1909-Since
2252	Johnston, ⅜x3¾ Cge. Rat. Nut, Bx. End, New No 10 Mowers, 1909-Since

PITMAN BOLTS—Continued

For Price, See Previous Page

No.	NAME AND DESCRIPTION
M483	Keystone, 7/8x2⅝ Cge. L. H. Rat. Nut, Kf. End, Milwaukee Gear Drive Mower, 1906-Since
M483½	Keystone, 7/8x3 Cge. L. H. Rat. Nut, Bx. End, Milwaukee Gear Drive Mower, 1906-Since
M322	McCormick, ⅜x3 Cge. R. H. Horn Nut (M152), Bx. End, Little 4 Mower, 1888-01
M483	McCormick, 7/8x2⅝ Cge. L. H. Rat. Nut (M482), Kf. End, Nos. 4 and Big 4 Mowers, 1888-97; New 4 and Vertical, 1896-Since; New Big 4, 1898-Since; Folding Daisy Reaper, 1893-Since
M483½	McCormick, 7/8x3 Cge. L. H. Rat. Nut (M482), Bx. End, New 4, New Big 4 and Vertical Mowers, 1902 Since; Folding Daisy Reaper, 1895-Since; Automatic Mower, 1903-Since
PG175	Milwaukee, ⅜x2¼ Cge. Rat. Nut, Both Ends, Nos. 5 and 6 Chain Drive Mower, 1894-Since
A199	Milwaukee, 7/8x3, Cge. L. H. Rat. Nut, Bx. End, Gear Drive Mower, 1906-Since
A198	Milwaukee, 7/8x2⅝ Cge. L. H. Rat. Nut, Kf. End, Gear Drive Mower, 1906-Since
1112½	Osborne, 7/8x3⅛ Cge. R. H. Frk. Nut, Bx. End, Nos. 3 and 4 and Big 4, 1886-98; B, C and D Mowers, 1897-02
1110½	Osborne, 7/8x2 Cge. R. H. Rat. Nut, Kf. End, Nos. 3 and 4 and Big 4, 1886-98; B, C and D Mowers, 1896-98.
6621	Osborne, 7/8x3½ Cge. Rat. Nut, Bx. End, Nos. 1, 2 and 3 Mowers, 1903-07
8356	Osborne, 7/8x3 Cge. Rat. Nut, Bx. End, Nos. 1, 2 and 3 Mowers, 1907-09; New Nos. 2 and 3 Mowers, 1909.
9959½	Osborne, 7/8x2½ Cge. Nchd. Nut (K920), Kf. End, New Nos. 2 and 3 Mower, 1910-Since
9960½	Osborne, 7/8x3 Cge. Nchd. Nut (K920), Bx. End, New Nos. 2 and 3 Mower, 1910-Since
7054	Piano, 7/8x2½ Cge. L. H. Rat. Nut (J147), Kf. End, Jones Chain Drive Mower, 1898-99 (J94 Head)
7055	Piano, 7/8x2½ Cge. R. H. Nchd. Nut (J363), Kf. End, Jones Chain Drive Mower, 1900-07 (J94 Head)
7068	Piano, 7/8x2¾ Mch. R. H. Frk. Nut, Bx. End, Jones Chain Drive Mower, 1901-07 (J94 Head), Vertical and Big Vertical, 1901-Since; Plain and Big Plain, 1907-Since (J429 Head)
7607	Piano, 7/8x2¾ Cge. R. H. Nchd. Nut, (J363), Kf. End, Vertical and Big Vertical Mowers, 1901-Since; Plain and Big Plain, 1907-Since (J429 Head)
	Standard (See Emerson).
1004	Thomas, ⅝x2½ Cge. Frk. Nut, Kf. End, New Mowers, 1898-07
1005	Thomas, ⅝x3 Mch. Frk. Nut, Bx. End, New Mower, 1898-Since
5486	Wood, 11/16x2½ Cge. Rat. Kf. End, Tubular Steel, 2-Horse Mowers, 1892-97
9534	Wood, 7/8x3, Cge. Frk. Nut, Bx. End, Admiral Mower, 1907-Since; Admiral Giant, 1908-Since; Vice Admiral, 1907-Since
K3435	Wood, 11/16x2⅝ Cge. Hex. Nut, Kf. End, Vertical Lift, Mowers 1915-Since.
K3460	Wood, ⅝x2⅞ Machine Fork Nut, Box End, Vertical Lift, Mowers, 1915-Since.

PITMAN BOLT ASSORTMENTS

To Fit McCormick

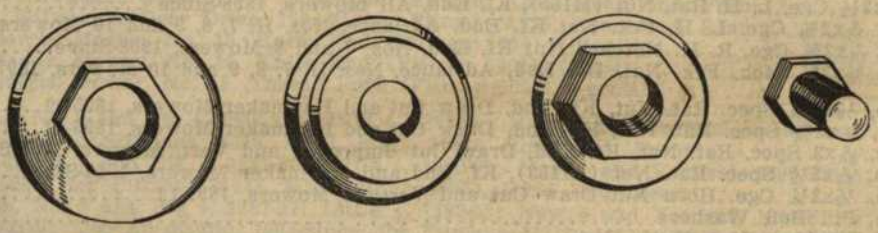
This assortment contains 10 each No. M483 Short and M483½ Long Pitman Bolts; a total of 20 put up in a box.

To Fit Deering

This assortment contains 10 each No. D2591 Short and D2592 Long Pitman Bolts; a total of 20 put up in a box.

No. 4820	Pitman Bolt Assortment, to fit McCormick	Each, $2.40
No. 2520	Pitman Bolt Assortment, to fit Deering	Each, $2.40

WRIST PIN NUTS AND CAP SCREWS.



No. PH101 to fit Milwaukee ..... Each, $0.08
All other numbers ..... Each, $0.14

Will fit accurately the Machines for which they are intended.

No.	NAME AND DESCRIPTION
M798	Acme, for M99A Wrist Pin
159½	Adriance, Nut for 159A Wrist Pin
A744	Champion, for H347 Wrist Pin
Z73	Dain, for Z5031 Wrist Pin
Z73	Deere, for Z5031 Wrist Pin
D471	Deering, for D1241 Wrist Pin
D757	Deering, for D1881 Wrist Pin
	Emerson, Cap Screw, 7/8x1 Hex., for M132S Wrist Pin
	Johnston, Cap Screw for 129C Wrist pin
	Johnston, Washer for 129C Wrist Pin
A143	Keystone, for A213 Wrist Pin
M91½	McCormick, for M90 Wrist Pin
PG165	Milwaukee, Cap Screw, 7/8x¾ Hex., for PJ172 Wrist Pin
PH101	Milwaukee, Washer, 7/8x1½, for PG165 Cap Screw
K532	Osborne, Nut for 5986 Wrist Pin
K909	Osborne, for 9835 Wrist Pin
	Standard (See Emerson).
2302	Wood, for 7171 and 8928 Wrist Pin

WRIST PINS

No. M99, to fit Acme.....Each, $1.70
All Wrist Pins to fit Champion, Deering and McCormick.....Each, $0.90
All others.....Each, $1.10

Average weight each ½ lb.

Will fit accurately the machines for which they are intended.

No.	NAME AND DESCRIPTION.
M99	Acme, Giant, 1903-14; Acme 1901-14; Pony One Horse 1913-Since.
M99A	Acme and Giant, 1915-Since; Vertical Lift 1913-Since with Nut M798.
159A	Adriance, Size H Mower, 1892-Since; Nos. 7 and 8, 1897-Since (1⅛x3⅞)
H347	Champion, Draw Cut Mower, 1897-02
A5146	Champion, Draw Cut Mower, 1905-07; New and Big Draw Cut, 1905-Since; Vertical Lift, 1904-Since; Improved and Improved Vertical, 1909-Since; Big Improved, 1910-Since (1⅛x4⅛)
H606	Champion, Draw Cut Mower, 1903-04
Z5031E	Dain, New Mower, Vertical Lift, 1905-Since; Plain Left 1912-Since (Z73 nut)
Z5031E	Deere, New Mower, 1895-Since (Z73 nut)
D1241	Deering, Ideal, Ideal Giant and Ideal O. H. Mowers, 1898-11; Ideal Vertical, 1902-06; Ideal Vertical O. H. 1903-11; New Ideal B 1918-Since (Replaces D211) (R. H. Nut D471)
D1881	Deering, New Ideal, New Ideal Vertical, 1905-12; New Ideal Giant, 1906-12; New Ideal "B," 1909-20; New Ideal O. H., "B," 1910-Since (L. H. Nut, D757)
M132S	Emerson, (Z726), All Standard Mowers, 1902-Since (Wood Pit)
129	Johnston, No. 8 Mower, 1890-Since; No. 9, 1896-Since; No. 10, 1901-Since; Imp. Cont. Reaper, 91-Since
A213	Keystone, Milwaukee Plain Gear Drive Mower, 1906; also Vertical, 1916-Since (Same as M90, McCormick).
M90	McCormick; New 4 and Vertical Lift Mowers, 1896-1915; New Big 4, 1898-1915; No. 6 and No. 6 Vertical, 1914-Since; Big 6, 1915-Since (R. H. Nut, M91½)
PJ172	Milwaukee, Nos. 3, 5 and 6 Mowers, 1898-Since
5986	Osborne, Osborne, Nos. 2 and 3 Mowers, 1903-Since (K532 Nut)
	Standard (See Emerson).
58	Thomas, all Mowers, 1895-Since
7171	Wood, Tubular Steel Mower, 1900-Since

KNIFE AND SICKLE CAPS AND GUIDES

For Illustration, See Page 723

Average weight each ¾ lb.

Will fit accurately the machines for which they are intended.

No.	NAME AND DESCRIPTION	Each
T79	Acme, Front on Inner Shoe, Hodges Mower, 1901-Since; Giant, 1903-Since	$0.25
T79A	Acme, Front on Inner Shoe, Vertical Lift only, 1913-Since.	$0.25
T27A	Acme, Rear on Inner Shoe, Pony, Hodges and Giant Mowers, 1908-Since	$0.50
T27C	Acme, Rear on Inner Shoe, Acme, 1917-Since; Giant 1915-Since	$0.50
3084	Adriance, Front on Inner Shoe, Nos. 7 and 8 Mowers, 1897-Since.	$0.30
3086A	Adriance, Rear on Inner Shoe, Nos. 7 and 8 Mowers (Replace 3086) 1897-Since	$0.55
A694	Champion, Rear on Inner Shoe, Draw Cut Mower, 1898-07.	$0.30
A728	Champion, Front on Inner Shoe, Draw Cut Mower, 1896-98.	$0.30
A796	Champion, Front on Inner Shoe, Draw Cut Mower, 1898-02.	$0.30
A816	Champion, Front on Inner Shoe, Draw Cut Mower, 1903-07; Vertical Lift, 1904-Since; New and Big Draw Cut 1905-Since	$0.30
A890	Champion, Rear on Inner Shoe, Vertical Lift, New and Big Draw Cut Mowers, 1905-08	$0.30
CM329	Crown, Knife Plate for Arch Shoe	$0.40
Z5326	Dain or Deere, Front on Inner Shoe Vertical and Plain Lift, 1915-Since	$0.20
Z30E	Dain, Front on Inner Shoe, New Mower, 1906-Since	$0.20
Z488	Deere, Mowers, Nos. 1 and 2, Big (Rear)	$0.50
D467	Deering, Front on Inner Shoe, Ideal and Ideal Giant Mowers, 1898-Since; Ideal Vertical, 1902-06	$0.30
D595	Deering, Rear on Inner Shoe, Ideal and Ideal Giant Mowers, 1901-Since	$0.30
D671	Deering, Rear on Inner Shoe, Ideal Vertical Mower, 1903-06.	$0.40
D826	Deering, Front on Inner Shoe, Ideal and Ideal Giant Mower, 1906-Since	$0.23
D984	Deering, Rear on Inner Shoe, New Ideal, Ideal Vertical, Ideal Giant and Ideal "B" Mowers, 1910-Since	$0.30
M528	Emerson, Front on Inner Shoe, (Replaces M467), 1911-Since	$0.25
M208	Emerson, Rear on Inner Shoe, All Standard Mowers, 1900-08; New Standard, 4½, 5 and 6 ft., 1903-08 (M203 Head) (Replaced by M505)	$0.30
M467	Emerson, Front on Inner Shoe, New Standard Mowers, 1906-Since (Replaces M361)	$0.25
M505	Emerson, Rear on Inner Shoe, New Standard Mowers, 1908-Since (Replaces M208)	$0.35
926	Johnston, Rear on Inner Shoe, Nos. 6, 8, 9 and Mayflower G. D. Mowers, 1896-Since; Mayflower C. D., 1898-Since; New, No. 10, 1901-Since	$0.45
1885	Johnston, Front on Inner Shoe, New No. 10 Mowers, 1909-Since.	$0.45
A134	Keystone, Rear on Inner Shoe (Milwaukee) Gear Drive Mower, 1906-Since.	$0.23
A133½A	Keystone, Front on Inner Shoe (Milwaukee), Gear-Drive Mower, Plain Lift, 1906 and Since	$0.23
PH2	Milwaukee, Front on Inner Shoe, Nos. 5 and 6 Mowers, 1895-Since.	$0.23
PM3	Milwaukee, Rear on Inner Shoe, Nos. 5 and 6 Mowers, 1904-Since.	$0.60
PG285	Milwaukee, Mower, Nos. 5 and 6, 1904 (Guide)	$0.35
M290	McCormick, Front on Inner Shoe, No. 4 and Big 4 Mowers, 1887-97; New 4 and Vertical Lift, 1896-Since; New Big 4, 1898-10.	$0.23
M293	McCormick, Rear on Inner Shoe, No. 4 and Big 4 Mowers, 1887-97.	$0.23
M652	McCormick, Rear on Inner Shoe, New 4 and Vertical Lift, 1896-Since; New Big 4, 1898-10	$0.23
MA652	McCormick, Rear on Inner Shoe, New Big 4, 1910-Since.	$0.23
M1239	McCormick, Front on Inner Shoe, New Big 4, 1898-10.	$0.18

KNIFE AND SICKLE CAPS AND GUIDES—Continued

No.	NAME AND DESCRIPTION	Each
K792	Osborne, Rear on Inner Shoe, Osborne, Nos. 1, 2 and 3, 1905-09; New Osborne, 1909-Since	$0.35
10008	Osborne, Rear on Inner Shoe, Osborne, Nos. 1, 2 and 3 Mowers, 1910-Since; New Osborne, 1910-Since	$0.35
J455	Piano, Front on Inner Shoe, Jones Vertical and Big Vertical Mowers, 1901-Since; Plain and Big Plain, 1907-Since	$0.28
	Standard (See Emerson).	
10	Thomas, Front on Inner Shoe, New Mower, 1898-Since	$0.20
B40	Thomas, Rear on Inner Shoe, New Mower, 1898-Since	$0.30

KNIFE AND SICKLE CLIPS

For illustrations, see following pages.

Average weight each ¾ lb.

Will fit accurately the Machines for which they are intended.

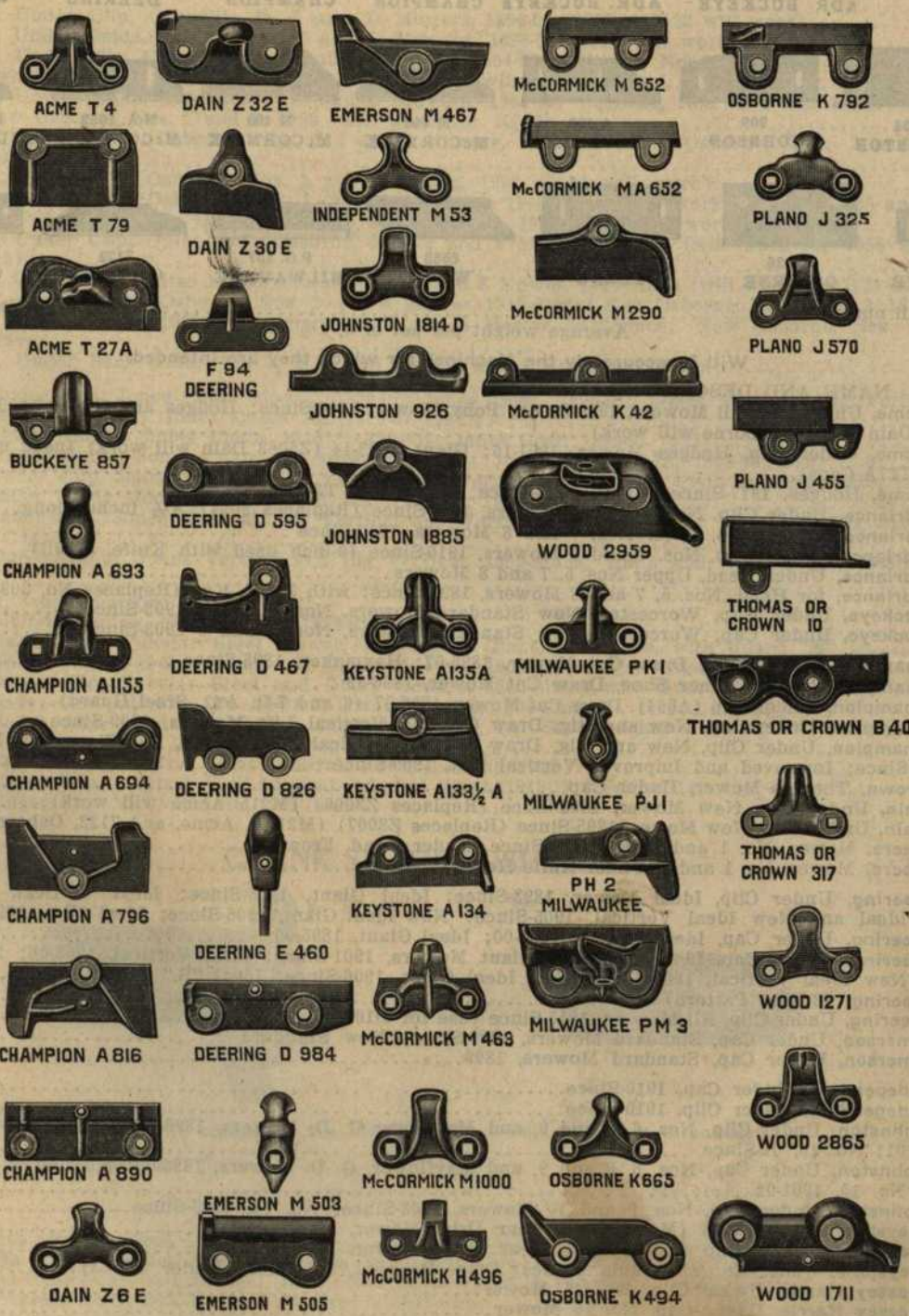
No.	NAME AND DESCRIPTION	Each
T4	Acme, all Mowers, 1900-Since	$0.15
A512	Acme, Hodges Header, 1893-06	$0.15
V44	Acme, All Binders, 1901-Since	$0.15
V174	Acme, All Binders, 1901-Since	$0.15
3093	Adriance, Nos. 7 and 8 Mower, 1899-Since, (Replaces 3293) (Interchange with 715C)	$0.15
857	Buckeye, Akron Light Mower, 16 Mower, 1903-Since	$0.15
A467	Champion, Draw Cut Mower, 1896-97; Haymaker, 1895-Since (4½ and 5 ft.) (A431 Guard)	$0.15
A468	Champion, Draw Cut Mower, 1898-07; Haymaker, 1895-01 (6 ft.) (A431 Guard)	$0.15
A693	Champion, Draw Cut Mower, 6 and 7 ft., 1898-07	$0.15
A886	Champion, New and Big Draw Cut Mower, 1905-08; Vertical, 1904-08	$0.15
A1155	Champion, Improved and Vertical Lift Mower, 1909-Since; Big Improved, 1911-Since	$0.15
3248	Champion, New Champion Binders, 1904-Since; Improved, 1909-Since	$0.15
Z6E	Dain, New Mower, 1895-Since	$0.15
Z5450	Dain, (use for Z6) Vertical and Plain Lift, 1916-Since	$0.15
HZ207	Deere, Binder, 1911-Since	$0.15
Z5797	Deere, Mower, No. 1 and 2 Big, 1920-Since (next to Head)	$0.15
Z5628	Deere, Mower, No. 1 and 2, Big, 1920-Since (on Bar)	$0.15
F94	Deering, Mower, New Deering and Front Cut Giant, 1890-07; Ideal, 1893-Since; Ideal Vertical 1902-06, New Ideal and New Ideal Vertical, 1905-Since; New Ideal Giant, 1906-Since; Ideal "B," 1909-Since (Steel)	$0.15
D927	Deering, Mower, Ideal Giant and New Ideal Giant and Ideal "B," 1909-Since (6 and 7 ft. only)	$0.15
E461	Deering, Junior and Improved Harvester, 1890-00; Ideal, 1898-09; New Ideal, 1908-Since	$0.15
E460	Deering, Junior and Improved Harvester, 1890-00; Ideal, 1898-09; New Ideal, 1908-Since (with Shank)	$0.15
F92	Deering, New Mower, 1890-97	$0.15
M106	Emerson, Standard Mower, 1896-08; New Standard, 1903-08 (4 to 6 ft. Replaces B40, see M503)	$0.15
M111	Emerson, Standard Mower, 1896-08 (7 and 8 ft., see M503)	$0.15
M503	Emerson, Standard Mower, 1908-Since (7 and 8 ft.) New Standard, 1908-Since, (4 to 6 ft. Replaces M106)	$0.15
B40	Emerson, Mower, 1884-1895	$0.15
M579	Emerson, Mower, 1914-Since (replaces M503, Interchangeable)	$0.15
M53	Independent, Mower, 1910-Since	$0.15
1814	Johnston, Mower, Nos. 9 and 10, 1903-08; No. 11, 1905-08; Mayflower, G. D., 1896-Since; Mayflower Chain Drive 1901-Since	$0.25
1814C	Johnston, Mower, Nos. 9, 10 and 11, 1909-Since	$0.25
1814D	Johnston, Mower, Nos. 10, 11, 12, 14, 1911-Since (Clip)	$0.25
L762	Johnston, Harvester Bonnie, 1900-Since; L H., Continental, 1900-Since; R. H. Continental, 1901-Since	$0.25
A135A	Keystone, (Milwaukee), Gear Drive Mower, 1906-Since	$0.15
M463	McCormick, Mower, No. 4 and Big 4, 1892-97; New No. 4 and Vertical, 1896-Since; New Big 4, 1898-10	$0.15
M533	McCormick, Mower, Little 4, 1894-01; Little Vertical, 1902-Since; New O. H., Plain and Vertical, 1910-Since	$0.15
L39	McCormick, Folding Daisy Reaper, 1890-05; New Folding Daisy, 1905-10; Gear Drive Daisy, 1909-Since	$0.15
H496	McCormick, Pipe Frame Harvester, 1888-01; Open Elevator, R. H., 1895-01; New Open Elevator, R. and L., 1901-Since	$0.15
J4	McCormick, Header, 1900-Since	$0.15
M254	McCormick, Mower, 1888 to 1891	$0.15
M1000	McCormick, Mower, New Big 4, 1910-Since	$0.15
MD1000	McCormick, Mower, No. 6 and No. 6 Vert., Big 6, 1918-Since	$0.15
MF1000	McCormick, Mower, No. 6 and No. 6 Vert., Big 6, 1918-Since	$0.15
M565	Massey Harris, Mower, No. 16, 1916-Since	$0.15
M341	Massey Harris, Mower, Nos. 3, 7, 8, 14 and 15, 1898-Since	$0.15
PJ1	Milwaukee, Mower, Nos. 5 and 6, 1895-Since; No. 3, 1898-Since (Replaces PH1)	$0.15
A135A	Milwaukee, (Keystone) Gear Drive Mower, 1906-Since	$0.15
PK1	Milwaukee, Mower, Nos. 3, 5 and 6, 1912	$0.15
E36	Osborne, Mower, Nos. 3 and 4 and Big 5, 1885-98	$0.15
K256	Osborne, Mower, Columbia, B, C and D, 1896-02 (see K665)	$0.15
K665	Osborne, Mower, Columbia, B, C and D, 1903-05; Osborne, Nos. 1, 2 and 3, 1903-Since (Replaces K256)	$0.15
J106	Piano, Jones Chain Mower, 1894-97; Chain Junior, 1896-03	$0.15
J46	Piano, Jones Chain Mower, 1890-94	$0.15
J325	Piano, Jones Chain Mower, 1898-07; Vertical and Big Vertical and Vertical Junior, 1903-08	$0.15
J570	Piano, Jones Vertical and Vertical Junior, 1909-Since; Plain and Big Plain Lift, 1909-Since	$0.15
	Standard, (see Emerson).	
317	Thomas, New Mower, 1898-Since	$0.15
B2	Thomas, Mower	$0.15
171	Wood, Mower, Tubular, Steel, 2-horse and Giant, 1892-06, with "A" Guard	$0.25
1372	Wood, Mower, Tubular, Steel, 2-horse and Giant, 1903-06 with "2355" Guard (Hook)	$0.25
2865	Wood, Mower, Admiral and Vice Admiral, 1907-Since; Admiral Giant, 1908-Since, with "L" Guard	$0.25
2866	Wood, Mower, Admiral and Vice Admiral, 1907-Since; Giant, 1908-Since, with "L" Guard (Hook)	$0.25

KNIFE AND SICKLE CLIPS, CAPS AND GUIDES—Continued

Will fit accurately the machines for which they are intended.

The illustrations below show only a few of the large number of patterns we carry in stock. If you do not find what you want in our list, send us a sample with number and name of machine and we will supply it.

A set of Knife Clips consists of five for the Knife and one for the Head, for 5-ft. Knife; other lengths, comparative.



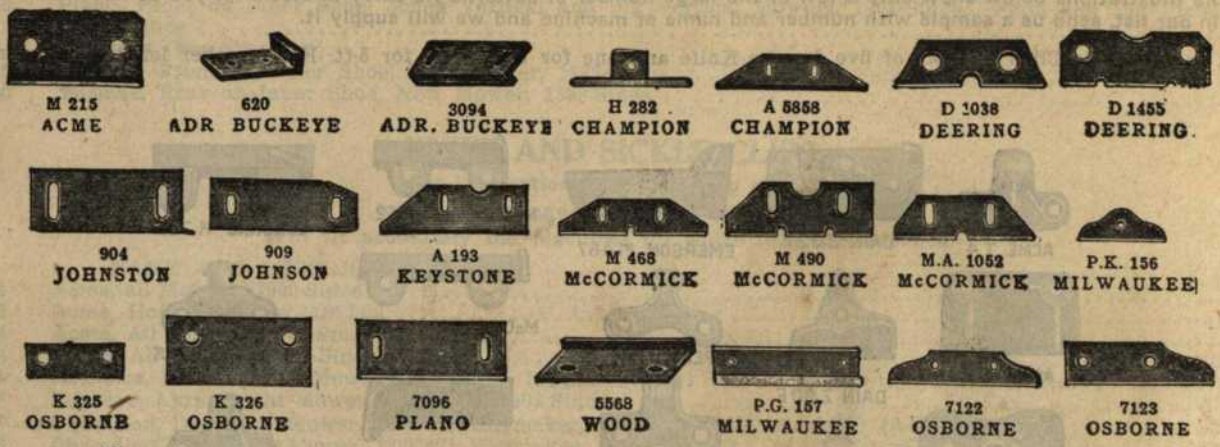
FOR LISTS, SEE PRECEDING PAGES

EVERY ITEM IN THIS LINE IS MADE WITH CARE AND SKILL TO INSURE ABSOLUTE FIT.

WEARING PLATES

The following illustrations are only a few of the large number of patterns we carry in stock. If you do not find what you want in our lists, send us a sample with number and name of Machine, and we will supply it.

A set of Wearing Plates consists of five under the Knife Clips and one under Head Cap for 5-ft. Knife; other lengths comparative.



M 215 ACME | 620 ADR BUCKEYE | 3094 ADR. BUCKEYE | H 282 CHAMPION | A 5858 CHAMPION | D 1038 DEERING | D 1455 DEERING

904 JOHNSTON | 909 JOHNSON | A 193 KEYSTONE | M 468 McCORMICK | M 490 McCORMICK | M.A. 1052 McCORMICK | P.K. 156 MILWAUKEE

K 325 OSBORNE | K 326 OSBORNE | 7096 PLANO | 5568 WOOD | P.G. 157 MILWAUKEE | 7122 OSBORNE | 7123 OSBORNE

All numbers. . . . . Each, $0.14

Average weight per set of 6, 1½ lbs.

Will fit accurately the Machines for which they are intended.

No.	NAME AND DESCRIPTION
M213A	Acme, Under Clip, all Mowers, 1900-Since; Pony Mower, 1900-Since; Hodges and Giant, 1909-Since (Z5064 Dain or 7122 Osborne will work)
M215	Acme, Under Cap, Hodges Mower, 1901-16; Giant, 1903-14 (Z5063 Dain will work) (used under T27 and T27A Caps)
M215B	Acme, Hodges, 1917-Since; Giant, 1915-Since; used under T27C
3094A	Adriance, Under Clip, Nos. 7 and 8 Mowers, 1910-Since (Replaces 3094), 4½ inches long
3094B	Adriance, Under Clip, Outer Nos. 7 and 8 Mowers, 1910-Since
3094C	Adriance, Under Clip, Nos. 7 and 8 Mowers, 1910-Since (9-inch used with Knife, 3110B)
3097	Adriance, Under Head, Upper Nos. 5, 7 and 8 Mowers
3098C	Adriance, for Head, Nos. 5, 7 and 8 Mowers, 1897-Since; with 3096A Key (Replaces No. 3098)
554	Buckeye, Under Clip, Worcester, New Standard Mowers, Nos. 5 and 6, 1903-Since
554½	Buckeye, Under Cap, Worcester, New Standard Mowers, Nos. 5 and 6 1903-Since
H282	Champion, Under Clip, Draw Cut Mower, 1895-07; Haymaker, 1895-Since
H315	Champion, Next to Inner Shoe, Draw Cut Mower, 1896-99
H426	Champion, Under Cap (A694), Draw Cut Mower, 1898-07 (6 and 7-ft. A42, Steel Guard)
A5857	Champion, Under Cap, New and Big, Draw Cut and Vertical Lift Mowers, 1909-Since
A5858	Champion, Under Clip, New and Big, Draw Cut and Vertical Lift Mowers, 1909-Since; Big Improved 1911-Since; Improved and Improved Vertical Lift, 1909-Since
1091	Crown, Thomas Mower, Under Cap
Z5063	Dain, Under Cap, New Mower, 1895-Since (Replaces Z3006) (M215 Acme will work)
Z5064	Dain, Under Clip, New Mower, 1895-Since (Replaces Z3007) (M213A, Acme, and 7122, Osborne, will work)
Z5685	Deere, Mower, No. 1 and 2 Big, 1920-Since, Under Head, Front
5870	Deere, Mower, No. 1 and 2, Under Knife Head, Rear
D1038	Deering, Under Clip, Ideal Mower, 1893-Since; Ideal Giant, 1895-Since; Ideal Vertical, 1902-06; New Ideal and New Ideal Vertical, 1905-Since; New Ideal Giant, 1906-Since; Ideal "B," 1909-Since
D1040	Deering, Under Cap, Ideal Mower, 1893-00; Ideal Giant, 1895-00
D1455	Deering, Under Cap, Ideal and Ideal Giant Mowers, 1901-Since; Ideal Vertical, 1902-06; New Ideal and New Ideal Vertical, 1905-Since; New Ideal Giant, 1906-Since; Ideal "B," 1909-Since
D1455	Deering, (3-Hole Pattern)
D3012	Deering, Under Clip, All Mowers, 1915-Since (use for D1038)
M66S	Emerson, Under Cap, Standard Mowers, 1900-Since; New Standard
Z245	Emerson, Under Cap, Standard Mowers, 1899
M1006	Independent, Under Cap, 1910-Since
M1005	Independent, Under Clip, 1910-Since
904	Johnston, Under Clip, Nos. 6, 8 and 9, and Mayflower G. D. Mowers, 1896-Since; Mayflower C. D., 1898-01; No. 10, 01-Since
909	Johnston, Under Cap, Nos. 6, 8 and 9, and Mayflower, G. D. Mowers, 1896-02; Mayflower, C. D., 1898-02; No. 10, 1901-02
1813	Johnston, Under Cap, Nos. 9 and 10 Mowers, 1903-Since; No. 11, 1905-Since
A192	Keystone, Under Clip (Milwaukee), Gear Drive Mower, 1906-Since
A193	Keystone, Under Cap (Milwaukee), Gear Drive Mower, 1906-Since
T964	Keystone, Under Cap (Milwaukee), Gear Drive Reaper, 1907-Since (Under T5963)
M1733	Massey Harris, Under Clip, No. 15 Mower
M1735	Massey Harris, Under Cap, No. 15 Mower
M468	McCormick, Under Clip, No. 4 and Big 4 Mower, 1892-97; New 4 and Vertical, 1896-Since; New Big 4, 1898-Since; Little 4, 1892-93
M1052	McCormick, Under Outer Clip, New 4, New Vertical and New Big 4 Mowers, 1907-Since; Little Vertical, 1906-08
M468½	McCormick, Under Clip, Little 4, 1894-01; Little Vertical, 1902-Since; New O. H. Plain and Vertical, 1910-Since; New 4, Vertical and New Big 4, Low Bar Foreign, 1896-Since
MA1052	McCormick, Under Clip, Little Vertical, 1909-Since; New O. H. Plain and Vertical, 1910-Since; New 4, Vertical and New Big 4, Low Bar Foreign, 1909-Since
M490	McCormick, Under Cap, No. 4 and Big 4 Mowers, 1892-97; New 4 and Vertical, 1896-Since; New Big 4, 1898-10; Little 4, 1892-01; Little Vertical, 1902-Since; New O. H. Plain and Vertical, 1910-Since

WEARING PLATES—Continued

For Price see Previous Page.

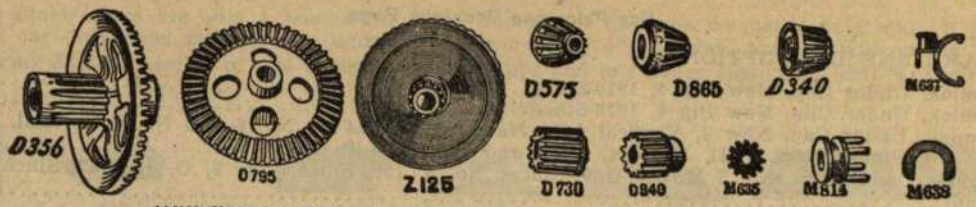
No.	NAME AND DESCRIPTION
MA490	McCormick, Under Cap, New Big 4, 1910-Since
M1263	McCormick, Under Clip, New Big 4, 1913-Since
MA1263	McCormick, Under Cap, New 4, Vertical Lift, New Big 4, 1914-15; No. 6 and No. 6 Vertical, 1914-Since; Big 6, 1915-Since; New O. H. Mowers, Plain and Vertical Lift, 1915-Since
PK156	Milwaukee, Under Clip, No. 5 Mower, 1894-Since; No. 6, 1902-Since; No. 3, O. H., 1898-Since (Replaces PH156)
PG157	Milwaukee, Under Cap, Nos. 5 and 6 Mowers, 1895-03; No. 3 O. H., 1898-Since
K325	Osborne, Under Clip, Columbia B, C and D Mowers, 1896-05 (9968 or 7122 will work)
K326	Osborne, Under Guide, Columbia B, C and D Mowers, 1896-05 (2926 will work)
7122	Osborne, Under Clip, Columbia B, C and D Mowers, 1904-05; Osborne, Nos. 1, 2 and 3 Mowers, 1904-09 (will work for 5977); M213A, Acme, or Z5064 Dain will work)
2926	Osborne, Under Guide, Columbia B, C and D Mowers, 1903-05; Osborne, Nos. 1, 2 and 3 Mowers, 1903-09; New Osborne, Nos. 2 and 3, 1909 (will work for K326)
2931	Osborne, Under Guide, Osborne, Nos. 1, 2 and 3 Mowers, 1903-09; New Osborne, Nos. 2 and 3, 1909 (2¼x6)
5977	Osborne, Under Clip, Osborne, Nos. 2 and 3 Mower, 1903 (7122 will work)
9968	Osborne, Under Clip, Osborne, Nos. 1, 2 and 3 Mower, 1910-Since (will work for 7122, K325 and 5977).
7055	Osborne, Under Clip, New Osborne, Nos. 2 and 3 Mower, 1909 (7123 will work)
7123	Osborne, Under Clip, Outer End, Osborne, Nos. 2 and 3 Mower, 1904-09 (will work for 7055 and 9967, 5½-inch)
9967	Osborne, Under Clip, Outer End, Osborne, Nos. 2 and 3 Mower, 1910-Since (will work for 7123 and 7055).
10009	Osborne, Under Guide, Osborne, Nos. 2 and 3 Mower, 1910-Since; New Osborne, Nos. 2 and 3, 1910-Since.
10011	Osborne, Under Plate, 10009, Osborne, Nos. 2 and 3 Mower, 1910-Since; New Osborne, Nos. 2 and 3, 1910-Since
10010	Osborne, Under Back Guide No. 1, 2, 3 and New 2 and 3 Mowers, 1910-Since
7094	Plano, Under Clip, Jones Chain Mower, 1894-07; Jones Gear, 1898-01; Jones Vertical, Big Vertical and Vertical Jr., 1903-06; Jones Chain Jr., 1896-07 (2x4¾)
7095	Plano, Under Guide, Jones Chain Mower, 1894-07; Jones Gear, 1898-01 (2x7)
7096	Plano, Under Guide, Jones Chain Jr., Mower, 1896-07; Jones Vertical Jr., 1903-06 (2x6)
A7621	Plano, Under Clip, Jones Vertical, Big Vertical and Vertical Jr., 1907-08; Plain and Big Plain, 1907-08
A7622	Plano, Under Guide, Jones Vertical and Big Vertical, 1903-06
JJ1356	Plano, Under Clip, Jones Vertical, Big Vertical and Vertical Jr., 1909-Since; Plain and Big Plain, 1909-Since (1⅝x5⅛)
JJ1358	Plano, Under Guide, Jones Vertical and Big Vertical, 1909-Since; Plain and Big Plain, 1909-Since (2⅛ x7)
	Standard, (see Emerson).
1091	Thomas, Under Guide, New Mower, 1898-Since
3464	Wood, Under Clip, Tubular Steel Mower, 1892-Since; Giant, 1901-Since, with Guard "A"
5447½	Wood, Under Cap, Tubular Steel and Giant Mowers, 1903-Since, with Guard 2355
7168	Wood, Under Clip, Tubular Steel and Giant Mowers, 1903-Since, with Guard 2355
8933	Wood, Under Cap, Admiral and Admiral Giant Mowers, 1908-Since
9575	Wood, Under Clip, Admiral and Vice Admiral Mowers, 1907-Since; Admiral Giant, 1908-Since
8934	Wood, Under Cap, Vice Admiral Mower, 1907-Since
K3138	Wood, Under Cap, Admiral, Vice Admiral, Admiral Giant, 1912-19
K3139	Wood, Under Clip, Admiral, Vice Admiral, Admiral Giant, 1912-19, Vertical Lift 1919-Since
K3423	Wood, Under Cap, Vertical Lift, 1915-Since

CRANK SHAFT BUSHINGS

Will fit accurately the machines for which they are intended.

No.	NAME AND DESCRIPTION	Each
Z94E	Dain (Front)	$1.20
Z97E	Dain (Rear)	$1.00
D345	Deering, Sleeve (Rear), Ideal, 1893-11	$0.70
D741	Deering, Crank Shaft Bushing, Front and Rear, New Ideal, 1905-12; New Ideal B, 1909-Since	$1.25
D993	Deering, Bevel Gear Shaft Box (Brass), R. H., New Ideal B, 10-14 (used for DA993)	$1.25
D994	Deering, Bevel Gear Shaft Box, L. H., New Ideal B, 10-Since	$1.00
G258	Deering, Crank Shaft Bush., Rear, New Ideal B, 14-Since	$0.65
D573	Deering, Sleeve, Ideal, Ideal Vert., 1900-06	$0.70
D347	Deering, Sleeve (Front), Ideal, Ideal V. L., Ideal Giant, 1893-1911	$1.25
M308	McCormick, Mower, No. 4, Big 4, New 4, Vertical Lift and New Big 4	$1.00
M343	McCormick, Mower, No. 4, Big 4, New 4, Vertical Lift and New Big 4	$0.60
M357	McCormick, Countershaft Bushing, New 4, Vert. Lift, 96; New Big 4, 98	$0.40
M1424	McCormick, Fly Wheel Shaft Bush. (Brass), Front, No. 6 and No. 6 Vert., 1914-Since; Big 6, 1915-Since	$1.25
M1413	McCormick, Fly Wheel Shaft Bush. (Rear), No. 6 and No. 6 Vert., 1914-Since; Big 6, 1915-Since	$0.70
M1414	McCormick, Countershaft Bushing, No. 6 and No. 6 Vert., 1914-Since; Big 6, 1915-Since	$0.40

GEARS, PINIONS, SHIPPERS, SHIPPER CASES AND CLUTCHES



Will fit accurately the Machines for which they are intended.

No.	NAME AND DESCRIPTION	Each
A758	Champion, Bevel Pinion, Draw-cut Mower, 1897-1907	.65
A705	Champion, Spur Pinion, Draw-cut Mower, 1897-1907	.90
301	Crown, Bevel Gear on Main Shaft, New Style Mower and Old Style, 12 and 36 Cogs	2.25
302	Crown, Triple Gear on Throwout Shaft, New Style Mower and Old Style	3.00
303	Crown, Drive Gear on Main Shaft, New Style Mower and Old Style, 34 Cogs	2.60
Z125E	Dain, Bevel Gear, New Mower, 1895-Since	3.00
Z130E	Dain, Bevel Pinion, New Mower, 1895-Since	.70
D356	Deering, Bevel Gear, Ideal Mowers, 1894-Since; Ideal Giant, 1895-00; Ideal Vertical Lift, 1902-06	3.00
D340	Deering, Bevel Pinion, Ideal and Ideal Giant, 1893-97	.65
D458	Deering Bevel Pinion, Ideal Mower 1898-Since; Ideal Giant, 1898-00; Ideal Vertical Lift, 1902-06	.65
D574	Deering, Bevel Gear, Ideal Giant Mower, 1901-Since	3.00
D575	Deering, Bevel Pinion, Ideal Giant Mower, 1901-Since	.65
D795	Deering, Bevel Gear, New Ideal Giant Mower, 1906-Since	2.50
D796	Deering, Bevel Pinion, New Ideal Giant Mower, 1906-Since	.65
D864	Deering, Bevel Gear, New Ideal and New Ideal Vertical Lift Mowers, 1907-Since	2.50
D989	Deering, Bevel Gear, New Ideal "B" Mowers, 1910-Since	2.50
D865	Deering, Bevel Pinion, New Ideal and New Ideal Vert. Lift Mowers, '07-Since; New Ideal "B," '09-Since	.65
D730	Deering, Spur Pinion, New Ideal and New Ideal Vertical Lift Mowers, 1905-Since	.75
D840	Deering, Spur Pinion, New Ideal Giant, 1906-Since	.85
M499	Emerson, Spur Gear, 1908	3.00
M521	Emerson, Pinion, 1909, 6 and 7 foot	1.00
M522	Emerson, Pinion, 1909-Since, 4½ and 5 foot	1.00
M404	Emerson, Bevel Gear, 1903-08	3.00
MA814	McCormick, Clutch, New 4, New Big 4 and Vertical Lift Mowers, 1901-Since	.85
M813	McCormick, Bevel Gear, New 4 and Vertical Lift, 1906-Since; New Big 4, 1898-01	2.75
M635	McCormick, Bevel Pinion, New 4 and Vertical Lift Mowers, 1906-Since; New Big 4, 1898-01	.65
M633	McCormick, Spur Pinion, New 4 and Vertical Lift Mowers and New Big 4, 1906-Since	1.00
M633½	McCormick, Special Washer for No. M633	
M764	McCormick, Shipper Vert. Lift Mower, 1896-Since	.40
M837	McCormick, Bevel Gear, New Big 4, 1902-Since	2.75
M838	McCormick, Bevel Pinion, New Big 4, 1902-Since	.65
M637	McCormick, Shipper, New 4, New Big 4, 1898-Since	.40
M638	McCormick, Shipper Case, New 4, New Big 4 and Vertical Lift Mowers, 1896-Since	.30
MA813	McCormick, Bevel Gear, 58 Teeth, New 4 and Vertical Lift Mowers, 1914 and 1915	2.75
M1400	McCormick, Clutch No. 6 and No. 6 Vert., 1914-Since, Big 6, 1915-Since	1.00
M1406	McCormick, Main Spur Pinion, No. 6 and No. 6 Vert., 1914-Since; Big 6, 1915-Since	1.00
MA1407	McCormick, Bevel Gear No. 6 and No. 6 Vert., 1914-Since; Big 6, 1915-Since	2.75
M1408	McCormick, Bevel Pinion, No. 6 and No. 6 Vert., 1914-Since	.65
MA1408	McCormick, Pinion (Bevel Gear), Big 6, 1915-Since	.65
PJ16	Milwaukee, Bevel Gear, No. 6 Mower, 1899	2.75

STEEL BALLS

We can furnish Steel Balls to fit the standard makes of machines. For sizes and prices, please refer to index.

ROLLER BEARINGS

Will fit accurately the machines for which they are intended.

No.	NAME AND DESCRIPTION	Each
V2002	Champion, Header and Push Binder, 1908	.60
V2004	Champion, Header, 1908-1910	.60
V2006	Champion, Push Binder, 1908	.50
D1413	Deering, Ideal Mower, 1894-1911 (12 Rollers)	.90
1305	Deering, Header and Push Binder, 1901-05 (7 Rollers)	.40
1306	Deering, Header and Push Binder, 1901-05 (9 Rollers)	.50
1359	Deering, Header and Push Binder, 1901-06 (9 Rollers)	.40
1362	Deering, Header and Push Binder, 1901-05 (10 Roller)	.60
1363	Deering, Header and Push Binder, 1901-05 (11 Rollers)	1.50
1366	Deering, Header and Push Binder, 1901-05 (11 Rollers)	2.00
1578	Deering, Header and Push Binder, 1902-05 (13 Rollers)	.80
H4974	Deering, Binder, New Ideal, 1908 (9 Rollers)	.40
C701	McCormick, Harvester and Binder, 1913 (Corn Harvester, 1899), (Header, 1900-02)	.40
V470½	McCormick, Harvester and Binder, R. H. and L. H., 1898-01	.60
V480	McCormick, Harvester and Binder, R. H. and L. H., 1898-13	.60
J204	McCormick, Mower, One-Horse, 1902-11	.60
J14	McCormick, Header and Binder, 1900-1902	1.50
C632	McCormick, Corn Harvester, 1898-99	.50
C521	McCormick, Harvester and Binder, Corn Harvester, 1898-99	.80
M630	McCormick, Mowers, New 4, Vertical, New Big 4, 1896-98	1.10
R204	McCormick, Headers and Header Binder, 1900-13	.85

PAWLS FOR MAIN WHEEL

In ordering give number and state whether right or left are wanted.

No. D252, to fit Deering.....Each, $0.18
All other styles.....Each, $0.12

Will fit accurately the Machines for which they are intended.

No.	NAME AND DESCRIPTION
T88	Acme, Pony, Mower, 1900-Since; Hodges, 1901-Since; Giant, 1903-Since
A704	Champion, Haymaker Mower, 1896-Since; Draw Cut, 1896-07; Vertical Lift, 1904-Since; New and Big Draw Cut, 1905-Since; Improved, 1909-Since
	Crown (See Thomas).
Z14	Dain or Deere, New Mower, 1895-1914
Z214	Deere, Right and Left, Vertical and Plain Lift, 1915-Since
D252	Deering, New Deering Mower, 1886-97; Ideal, 1893-00; Ideal Giant, 1895-00
D500	Deering, Ideal and Ideal Giant Mowers, 1901-Since; Vertical, 1902-06; New Ideal, New Ideal Giant and New Ideal Vertical, 1905-Since
M500	Emerson, New Standard Mowers, 4½ to 7 feet, 1908-09
8F	Johnston, No. 8 Mower, 1890-Since; No. 9, 1896-Since; No. 10, 1901-Since
A123½	Keystone, Milwaukee Gear Drive Mower, 1906-Since
M294	McCormick, No. 4, Big 4 and Little 4, 1888-97; New 4 and New Big 4 and New Vertical, 1896-Since (Right)
M295	McCormick, No. 4, Big 4 and Little 4, 1888-97; New 4, New Big 4 and New Vertical, 1896-Since (Left)
M4	Massey Harris, No. 20 and No. 21 Mowers, 1916-Since (Left)
M5	Massey Harris, No. 20 and No. 21 Mowers, 1916-Since (Right)
PG25	Milwaukee, No. 6 Mower, 1892-Since
PR25	Milwaukee, No. 5 Mower, 1894-Since
K218	Osborne, Columbia, "B" Mower, 1899-05; "C," 1896-05; "D," 1898-05
K610	Osborne, Osborne No. 1 Mower, 1904-Since; Nos. 2 and 3, 1903-Since
K932	Osborne, New Osborne, Nos. 2 and 3, 1910-Since (Left)
K934	Osborne, New Osborne, Nos. 2 and 3, 1910-Since (Right)
	Standard (See Emerson).
43	Thomas, New Mower, 1898-Since (also Old Crown Mower)
2162½	Wood, Tubular Steel Mower, 1901-05
2749	Wood, Tubular Steel Mower, 1906-Since; Admiral and Admiral Giant, 1907-Since

PAWL SPRINGS

No. 46, to fit Deering.....Each, $0.12
All other springs.....Each, $0.06

Will fit accurately the Machines for which they are intended.

No.	NAME AND DESCRIPTION
M337A	Acme, All Mowers, 1901-Since
A85	Champion, Haymaker Mower, 1895-Since; Draw Cut, 1895-07; Vertical 1904-Since; New and Big Draw Cut, 1905-Since; Improved, 1909-Since
	Crown, (See Thomas).
55S	Dain, New Mower, 1895-Since
55S	Deere, New Mower, 1895-Since
46	Deering, New Mower, 1886-97; Ideal and Ideal Giant, 1896-00 (for D252, size ⅛x3⅜)
76	Deering, Ideal and Ideal Giant Mowers, 1901-Since; Vertical, 1902-06; New Ideal, New Ideal Giant and New Ideal Vertical, 1905-Since (for D500, size ⅛x2½)
Z60	Emerson, Standard Mowers, 4½, 5 and 6 ft., 1885-Since; 7 ft., 1886-05, 8 ft., 1894-05 (for A75, 1⅝ in. long)
Z753	Emerson, Standard Mowers, 7 and 8 ft., 1906-Since (for M461)
19½	Johnston, No. 6 Mower, 1880-SinceN No. 7, 1884-Since; No. 8, 1890-Since; No. 9, 1896-Since; No. 10, 1901-Since
M296	McCormick, No. 4, Big 4 and Little 4 Mower, 1888-97; New 4, New Big 4 and Vertical Lift, 1896-Since
P171	Milwaukee, No. 6 Mower, 1892-Since
PR171	Milwaukee, No. 5 Mower, 1894-Since
84X	Osborne, Columbia "B" Mower, 1899-05; "C," 1896-05; "D," 1898-05
97X	Osborne, Osborne, No. 1 Mower, 1904-Since; Nos. 2 and 3, 1903-Since
7865	Piano, Jones Vertical and Big Vertical Mowers, 1901-05 (⅛x2½, 15 Coil)
76	Piano, Jones Vertical and Big Vertical Mowers, 1906-Since; Plain and Big Plain, 1907-Since (⅛x2½, 12 Coil)
	Standard, (See Emerson).
1081	Thomas, New Mower, 1898-Since
5466	Wood, Tubular Steel Mower, 1891-05 (Replaced by 8235)
8235	Wood, Tubular Steel Mower, 1906-Since; Admiral, 1907-Since; Admiral Giant and Vice Admiral, 1908-Since (⅜x1⅝)

SPECIAL PAWL SPRING—If the dealer will keep a supply of our regular No. 4 and No. 5 Compression Springs as listed on page 334, he will be able to take care of the demand for practically all patterns of Pawl Springs and at a much **better profit than to buy the springs separately.**

SHOE SOLES OR RUNNERS FOR MOWERS

Will fit accurately the Machines for which they are intended.

No.	NAME AND DESCRIPTION	EACH
M97	Acme Inner Pony 1906-Since; Acme 1901-10; Giant 1905-09	.60
M97A	Acme Inner Acme and Giant 1910 to 1916	.60
M97B	Acme Inner Vertical 1913-Since	.50
M94	Acme Outer Acme and Giant, 1902-06	.50
M94A	Acme Outer Pony 1906-09 Acme and Giant 1906-07	.50
M94B	Acme Outer Pony 1900-Since; Acme and Giant 1908-Since, Vertical 1913-Since (with post T38B order M834)	.50
3099A	Adriance Inner Nos. 7 and 8 to 1899	.75
3099D	Adriance Inner Nos. 7 and 8, 1899-Since (replaces 3099A)	.90
714½	Adriance Outer Nos. 7 and 8, 1892-09	.40
3073J	Adriance Outer Nos. 7 and 8, 1910-Since	.50
C18½	Buckeye Inner Wor. Nos. 5 and 6, 1903-Since.	.60
L1	Buckeye Outer Wor. Nos. 5 and 6, 1903-10	.50
574	Buckeye Outer Wor. Nos. 5 and 6, 1910-Since.	.60
H381	Champion Inner Draw Cut, 1903-07; Vertical and New Big Draw Cut 1906-12	.75
A5077	Champion Outer 1 Horse DC 04-06	.60
H108	Champion Outer DC 96-97; Two Horse 95-98	.60
H385	Champion Outer DC 98-00	.60
H357	Champion Inner DC 97	.75
A5810½	Champion Inner Imp. and Imp. Vert. 1909-10.	.75
A6056½	Champion Inner Imp. and Imp. Vert. Big Imp. 1911	.75
A6207	Champion Inner Imp. and Imp. Vert. Big Imp. 1912-Since.	.60
H437	Champion Outer Draw Cut 1898-07	.60
H483	Champion Outer New Big Draw Cut and Vertical 1904-12	.60
A5847	Champion Outer Imp. and Imp. Vert. and Big Imp. 1909-Since	.60
H263	Champion Inner Two-Horse 95-96	1.00
H365	Champion Inner Two-Horse 97-09	1.00
50	Crown Outer, all years	.75
54	Crown Inner, all years	.75
Z5024	Dain Inner New Vertical, 1912-Since	.90
Z5085	Dain Outer New Vertical, 1912-Since	.40
Z5134	Dain Inner, 15-after	.90
Z5231	Dain Outer, 15-after	.60
D1374	Deering Inner Ideal, Ideal Vert. and Ideal Giant, 1901-11	.80
D2097	Deering Inner New Ideal, New Ideal Vert. and New Ideal Giant, 1906-12	.80
D2510	Deering Inner New Ideal "B," 1910-Since	.80
D1080	Deering Inner Ideal, 93-00; Ideal Giant, 95-00.	.80
J1059	Deering Inner One-Horse, 91-96; Ideal One-Horse, 96 and since; Vert. Lift One H, 03-Since	.80
D1647	Deering Outer with J184 Vert. Lift, 03-06; Ideal Giant, 03—Pacific Coast	.55
J1223	Deering Outer with J189; Ideal One-Horse, 03 and since; Ideal Vert. One-Horse, 03-Since	.60
D2937	Deering Outer New Ideal "B," 1910-Since (with J189)	.75
M95S	Emerson Inner New Standards 4 to 7-ft., 1903-Since	.75
M70S	Emerson Outer, 00 to 03	.45
M70½S	Emerson Outer, 00 to 03, with M223 Bracket	.75
Z300	Emerson Outer, 00 to 03	.45
Z300½	Emerson Outer 00 to 03, with M223 Bracket	.75
M173½	Emerson Outer New Stand. 4 to 7 ft. with M223 Bracket	.75
M173S	Emerson Outer New Stand. 4 to 7 ft	.45
50FC	Johnston Outer Nos. 9-10-11-12	.60
63FC	Johnston Outer with Brkt. Nos. 9-10-11-12-14	1.20
1033	Johnston Inner No. 9	1.15
1812	Johnston Inner No. 10	1.15
X130	Johnston Inner No. 11	1.05
2323	Johnston Inner No. 12	1.10
63FD	Johnston Outer No. 14	1.05
50FD	Johnston Inner No. 14	1.05
A223	Keystone Outer 04-11	.45
A222	Keystone Inner 05-11	.60
M259	Keystone Outer 12	.60
M465	Keystone Inner 12	.80
MB465	Keystone Inner 13	.80
M465	McCormick Inner New 4, New Big 4 and Vertical, 1896-11	.80
MA465	McCormick Inner Use MB465	.80
MB465	McCormick Inner New 4, New Big 4 and Vertical, 1912-Since, MA465	.80
MA1001	McCormick Inner	.80
M867	McCormick Inner Little Vertical 02	.60
MA275	McCormick Inner Use MB465	.80
M869	McCormick Outer Little Vertical 02	.90
MA259	McCormick Outer	.60
MB259	McCormick Outer	.60
M550	McCormick Inner Little 4, 1904 and since	.40
M259	McCormick Outer New 4, New Big 4 and Vertical, 1896-Since (with MA257)	.60
PJ108	Milwaukee Inner Nos. 5 and 6, 1895-Since	.75
PH108	Milwaukee Inner No. 5 Mower, 1894; No. 6 Mower, 93-94	.75
PJ278	Milwaukee Outer No. 3 Mower, 98-11; No. 5 Mower, 95-11; No. 6 Mower, 95-11	.85
NA108	Milwaukee Inner No. 3 Mower, 98	.60
M259	Milwaukee Outer Nos. 3-5-6 and Keystone Gear Drive Mowers, 12-Since	.60
MA465	See MB465.	
MB465	Milwaukee Inner Nos. 3-5-6 and Gear Drive Mowers, 12-Since	.80
PG107	Milwaukee Outer Nos. 5 and 6, 1895-11	.50
A223	Milwaukee Outer Keystone Gear Drive, 06-11.	.45
2857	Osborne Inner Columbia C and D, 1896-05	.75
7010	Osborne Inner New Osborne Nos. 2 and 3, 1904-Since	.60
7629	Osborne Inner No. 3 Mower, 09-11	.75
7186	Osborne Inner No. 1 Mower, 04-Since	.75
10959	Osborne Outer New Osb. No. 2, 1912-Since	.60
9017	Osborne Outer	.75
7255	Plano Inner Jones Chain, 1894-07; Jones Gear, 1898-01	.50
7788	Plano Outer, 00-07	.60
7710	Plano Inner, 02-Since	.60
7711	Plano Inner, 03-Since	.60
JJ1216	Plano Inner, 07-Since	.60
7708	Plano Inner Plain and Big Plain Lift, Vertical and Big Vertical Lift, 1909-Since	.75
7351	Plano Outer Jones Chain, 1894-07; Jones Gear 1898-01; Plain and Big Plain Lift, Vertical and Big Vertical Lift, 1909-Since	.60
1041	Thomas Inner New Crown, 1898-Since	.75
54	Thomas Outer New Crown, 1898-Since	.75
1096	Thomas Ditch Bank Mower, Outer	.75
1107	Thomas Ditch Bank Mower, Outer	.75

SECTION, GUARD AND HEAD RIVETS

All sizes regularly packed in 1-lb. packages. We can also furnish in 100 and 200-lb. kegs the following sizes only: ½x5½ B. H., ⅞x5½ B. H., 1¼x6 C. S.

(C.S.) Countersunk Head.
No. 5 Rivets are $\frac{7}{32}$-inch diameter.
No. 5½ Rivets are 13/64-inch diameter.

(B.H.) Bung Head.
No. 6 Rivets are $\frac{1}{4}$-inch diameter.
No. 6½ Rivets are 11/64-inch diameter.

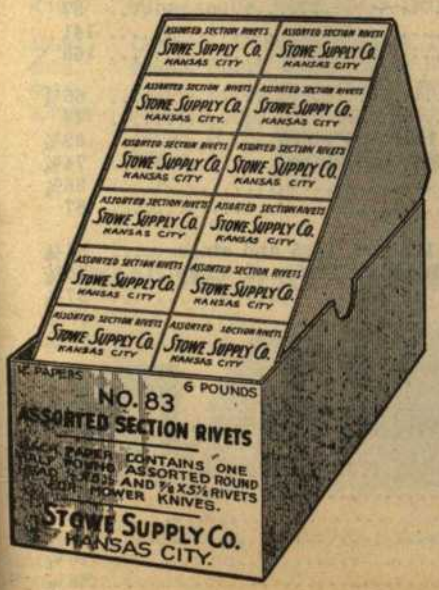
Section, Guard and Head Rivets, any size, in 1-lb. packages.....Per lb., $0.22
½x5½ B. H., ⅞x5½ B. H., 1¼x6 C. S. in 100-lb. Kegs.....Per 100 lbs., $17.00
½x5½ B. H., ⅞x5½ B. H., 1¼x6 C. S. in 200-lb. Kegs.....Per 100 lbs., $16.00

SIZES OF RIVETS USED ON DIFFERENT MACHINES.

Name	Knife Head Number	Size of Rivet for Section	Size of Rivet for Knife Head	Size of Rivet for Guard Plate
Acme, Mower, '01-Since.	T6X	½x6 B.H.	¾x6 B.H.	1⅛x6 C.S.
Acme, Binder, '01-Since.	V40	½x6 B.H	¾x6 B.H.	1 x6 C.S.
Adriance, Mower, '97-Since.	557F	½x5½ B.H.	⅞x5½ B.H.	
Buckeye, Mower, '95-Since.	864	½x6 C.S.	⅞x6 C.S.	1⅛x6 C.S.
Champion, Mower, '95 to '04.	A415X	½x5½ B.H.	⅞x5½ B.H.	1⅛x6 C.S.
Champion, Mower, '04-Since.	A870	½x5½ B.H.	⅞x5½ B.H.	1⅛x6 C.S.
Champion, Binder, '95-Since.	1852	$\frac{7}{16}$x6 C.S.	¾x6 B.H.	¾x5 C.S.
Dain, Mower, '95-Since.	Z4E	½x5½ B.H.	⅞x5½ B.H.	1¼x6 C.S.
Deere, Mower, '95-Since.	Z4E	½x5½ B.H.	⅞x5½ B.H.	1¼x6 C.S.
Deere, Binder, '10-Since.	HZ57	⅜x6 B.H.	¾x5½ B.H.	
Deering, Mower, Wood Pit.	D463	½x5½ B.H.	⅞x5½ B.H.	1¼x6 C.S.
Deering, Mower, Iron Pit.	F123	½x5½ B.H.	1x5½ B.H.	1¼x6 C.S.
Deering, Binder, '98 to '03.	H877	⅜x6 B.H.	¾x5½ B.H.	1 x6 C.S.
Deering, Binder, '03-Since.	H260	$\frac{7}{16}$x6 B.H.	¾x5½ B.H.	1 x6 C.S.
Deering, Header, '06-Since	846	$\frac{7}{16}$x5½ B.H.	$\frac{15}{16}$x5½ B.H.	⅞x5½ C.S.
Deering, Header, '07-Since	806	$\frac{7}{16}$x5½ B.H.	$\frac{15}{16}$x5½ B.H.	⅞x5½ C.S.
Deering, Header, '13-Since	923	$\frac{7}{16}$x5½ B.H.	$\frac{15}{16}$x5½ B.H.	⅞x5½ C.S.
Emerson, Standard Mower.	M203	½x5½ B.H.	1x5½ B.H.	1¼x6 C.S.
Johnston, Mower, '96 to '09.	919	½x5½ B.H.	1x5½ B.H.	1¼x6 C.S.
Johnston, Mower, '09-Since.	2211	½x5½ B.H.	1x5½ B.H.	
Johnston, Binder, '00-Since.	K306	⅜x6 B H.	¾x6 B.H.	
McCormick, Mower.	M139	½x5½ B.H.	⅞x5½ B.H.	1¼x6 C.S.
McCormick, Binder, '90 to '01.	H732	⅜x6 B.H.	¾x6 B.H.	1 x6 C.S.
McCormick, Binder, R. H., '95 to '01.	K43	⅜x6 B.H.	¾x6 B.H.	1 x6 C.S.
McCormick, Binder, L. H., '01-Since.	B23	⅜x6 B.H.	¾x6 B.H.	
McCormick, Binder, R. H., '01-Since.	B410	$\frac{7}{16}$x6 B.H.	⅞x6 B.H.	
McCormick, Header, '01-Since	J191	$\frac{7}{16}$x5½ B.H.	1⅜x5½ B.H.	⅞x5½ C.S.
Milwaukee, Mower, Chain Drive.	PG6	½x5½ B.H.	⅞x5½ B.H.	1¼x6 C.S.
Milwaukee, Mower, Gear Drive.	A184	½x5½ B.H.	⅞x5½ B.H.	1¼x6 C.S.
Milwaukee, Binder, '89-Since.	S34	⅜x6 B.H.	¾x6 B.H.	
Osborne, Mower.	K284	½x6 B.H.	⅞x5½ B.H.	1¼x6 C.S.
Osborne, Binder, '85 to '02.	B587	½x6 B.H.	⅞x6 B.H.	
Plano, Mower, '07-Since.	J429	½x5½ B.H.	⅞x5½ B.H.	1¼x6 C.S.
Plano, Binder, '95 to '07.	L66	⅜x6 C.S.	¾x6 B.H.	
Thomas, Mower.	6	½x6 B.H.	1x5½ B.H.	
Wood, Mower, '91-Since.	1680	½x6 C.S.	⅞x5½ C.S.	
Wood, Mower, '03-Since.	2479	½x6 C.S.	⅞x5½ C.S.	
Wood, Mower, '08-Since.	2862	½x6 C.S.	⅞x5½ C.S.	

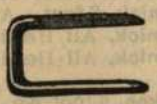
The above list does not represent all the sizes we can furnish of these rivets. The list is shown merely as a guide in specifying the sizes most commonly used. We can furnish practically any size of rivet required. For Pitman, Canvas and other rivets, see page 338.

No. 83 Assortment Rivets



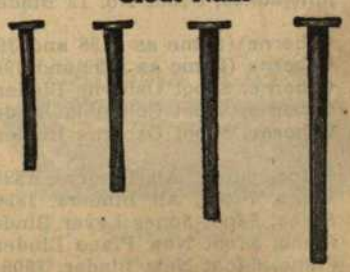
This assortment consists of 12 papers. Each paper weighs one-half pound and contains enough rivets for one mower knife, for both the section and head. The rivets are ½x5½ and ⅞x5½ Bung Head, and can be used on almost any mower knife. For price see page 338.

Double Pointed Tacks



Furnished in sizes Nos. 5 to 14. Packed in ⅛-lb. papers 1 dozen in a carton. For price see page 407.

Clout Nails



For fastening stacker slats, elevator buckets, etc. Packed in ½-lb. papers; stock sizes, ¾, ⅞, 1, 1⅛, 1¼ inches.

Clout Nails.....Per lb., $0.40

FITTED BINDER AND HEADER REEL FANS

For 6-ft. machine. . . . . Per doz., $ 5.30
For 7-ft. machine. . . . . Per doz., $ 6.00
For 8-ft. machine. . . . . Per doz., $ 6.70
For 12-ft. machine. . . . . Per doz., $10.10
For 14-ft. machine. . . . . Per doz., $10.80

Average weight 6-ft. Fan, 1¾ lbs.; 7-ft. Fan, 2 lbs.; 8-ft. Fan, 2¾ lbs.; 12-ft. Fan, 5 lbs.; 14-ft. Fan, 6 lbs.

Will fit accurately the Machines for which they are intended

No.	NAME AND DESCRIPTION	Length, ins.
V555A	Acme (Replaces V555), Six-foot Queen Binder, 1905 and since. . . .	63½
V556A	Acme (Replaces V556), Seven-foot Queen Binder, 1905 and since . . .	75½
V1103	Acme, Eight-foot Queen Binder, 1908 and since. . . .	87½
AH247	Acme, 12 foot, All Headers, 1880-Since. . . .	143
AH248	Acme, 14 foot, All Headers, 1880-Since. . . .	167
2320	Adriance, No. 2 and 3 Binders, Six-foot, 1903. . . .	64½
2320B	Adriance, No. 2 and 3 Binders, Seven-foot, 1903. . . .	76½
M246	Champion (Same as M240, Six-foot. All Binders 1903 and since). . . .	64¼
M247	Champion (Same as M241, Seven-foot. All Binders, 1903 and since) . . .	74
M173	Champion, Eight-foot. All Binders, 1903 and since. . . .	87¼
N779	Champion, Six-foot Force Feed Binder, 1895 to 1903. . . .	65
N780	Champion, Seven-foot Force Feed Binder, 1895 to 1903. . . .	73¾
M240	Champion, New Champion Binders, Six-foot, 1903. . . .	64¼
M241	Champion, New Champion Binder, Seven-foot, 1903. . . .	73½
HZ9087	Deere, Six-foot Light Draft Binder, 1912 and since. . . .	63
HZ9088	Deere, Seven-foot Light Draft Binder, 1912 and since. . . .	75
HZ9089	Deere, Eight-foot Light Draft Binder, 1912 and since. . . .	87
E1394	Deering, Six-foot Ideal, 1898 to 1902. . . .	65½
E1395	Deering, Seven-foot Ideal, 1898 to 1902. . . .	78
H4392	Deering (Same as H2840), Six-foot Ideal and New Ideal Binders, 1902 and since. . . .	63½
H4528	Deering (Same as H2841), Seven-foot Ideal and New Ideal Binders, 1902 and since. . . .	76
H4535	Deering (Same as H2703), Eight-foot Ideal and New Ideal Binders, 1901 and since. . . .	90½
N3019	Independent, Six-foot Binder, 1910. . . .	66
N3018	Independent, Seven-foot Binder, 1910. . . .	78⅝
N3017	Independent, Eight-foot Binder, 1910. . . .	91
K571C	Johnston, Six-foot Continental Binder, 1910 and since. . . .	62¾
K136F	Johnston, Seven-foot Continental Binder, 1910 and since. . . .	75½
K670D	Johnston, Eight-foot Continental Binder, 1910 and since. . . .	87
L113	Johnston, Bonnie Binder, 5½-foot, 95-05. . . .	57¾
L114	Johnston, Bonnie Binder, 6½-foot, 95-05. . . .	69½
L115	Johnston, Bonnie Binder, 7-foot, 1895. . . .	74½
L882	Johnston, Bonnie Binder, 6-foot, 1906. . . .	63½
V273	McCormick, 6-foot Right Hand Open Elevator Binder, 1894 to 1901. . . .	64
V274	McCormick, 7-foot Right Hand Open Elevator Binder, 1894 to 1901. . . .	76
B68	McCormick, 6-foot. All Binders, 1901 and since. . . .	63
B69	McCormick, 7-foot. All Binders, 1901 and since. . . .	75
B70	McCormick, 8-foot. All Binders, 1902 and since. . . .	87
J169	McCormick, All Headers, 1900-Since, 12-foot. . . .	141
J169½	McCormick, All Headers, 1900-Since, 14-foot. . . .	165
S536	Milwaukee, 6-foot No. 10 Binder, 1890 and since. . . .	65¼
S549	Milwaukee, 7-foot No. 10 Binder, 1892 and since. . . .	78
SL861	Milwaukee, 6-foot No. 10 Binder, 1900 to 1910 and No. 12 Binder, 1907 and since. . . .	62¾
SL990	Milwaukee, 7-foot No. 10 Binder, 1900 to 1910 and No. 12 Binder, 1907 and since. . . .	74¾
S584	Milwaukee, 8-foot No. 12 Binder, 1907 to 1913. . . .	86¾
B70	Milwaukee, 8-foot No. 12 Binder, 1914 and since. . . .	87
J9425	Osborne (Same as J198 and J9066), 6-foot Columbia and Osborne Binders, 1895 and since. . . .	63¼
J9426	Osborne (Same as J199 and J9066), 7-foot Columbia and Osborne Binders, 1895 and since. . . .	75¼
J9458	Osborne, 8-foot Osborne Binder, 1910 and since. . . .	87¼
J9014	Osborne, 8-foot Columbia Binder, 1904 to 1906. . . .	87¼
J9173	Osborne, 8-foot Osborne Binder, 1906 to 1909. . . .	87¼
6073	Piano, 6-foot, All Binders, 1896 to 1909. . . .	66½
6076	Piano, 7-foot, All Binders, 1896 to 1909. . . .	78½
6077	Piano, 8-foot Jones Lever Binder, 1904 to 1907. . . .	90½
L2932	Piano, 8-foot New Piano Binder, 1907 to 1909. . . .	90½
L3385	Piano, 6-foot New Binder, 1909 to 1911. . . .	65½
L3386	Piano, 7-foot New Binder, 1909 to 1911. . . .	77½
L3263	Piano, 8-foot New Binder, 1908 to 1911. . . .	88½
L3592	Piano, 6-foot Improved Binder, 1911 and since. . . .	64½
L3593	Piano, 7-foot Improved Binder, 1911 and since. . . .	76½
L3594	Piano, 8-foot Improved Binder, 1911 and since. . . .	88½

BLANK BINDER AND HEADER REEL FANS

6 foot, 2¾x½.....Per dozen, $4.80
7-foot, 2¾x½.....Per dozen, $5.50
8-foot, 2¾x½.....Per dozen, $6.30
12-foot, 2¾x½.....Per dozen, $10.10
14-foot, 2¾x½.....Per dozen, $10.80

Average weight 6-ft. Fan, 1¾ lbs.; 7-ft. Fan, 2 lbs.; 8-ft. Fan, 2¾ lbs. ; 12-ft. Fan, 5 lbs.; 14-ft. Fan, 6 lbs.

FITTED BINDER AND HEADER REEL ARMS

All numbers.....Per dozen, $4.10

Average weight each ⅞ lb.

Will fit accurately the Machines for which they are intended.

No.	NAME AND DESCRIPTION	Length, Ins.
AH468	Acme, Hodge Header, 1896 and since	29½
V554	Acme, Short, Queen and Acme Binders, 1901 and since	33½
V1013	Acme, Long, Queen and Acme Binders, 1905 and since	37¼
2318C	Adriance, No. 2, R. H. Binder (Replaces No. 2318A)	51½
2319A	Adriance, No. 2, R. H. Binder (Replaces No. 2319)	29¼
	Buckeye, Frameless Binder, '91-'94	63½
M200	Champion, New Binder, 1902 to 1904	39
M236	Champion, Force Feed and New Binders, 1903 to 1910	38⅝
K3042	Champion, Improved Binder, 1909 and since	36½
HZ9110	Deere, Light Draft Binder, 1912 and since	33⅜
E1390	Deering, Short. All Binders, 1898 to 1902	30
E1392	Deering, Long. All Binders, 1898 to 1902	53
H2037	Deering, Ideal and New Ideal Binders, 1901 and since	35¼
1912	Deering, Push Header and Binders, No. 2 Header	31½
N3016	Independent, Binder, 1910	
L105	Johnston, Bonnie Binder, 1895	46¾
L106	Johnston, Bonnie Binder, 1895	27
H428	McCormick, Short. All Binders, 1887 and since	33
H904	McCormick, Long. All Binders, 1887 and since	39
J167	McCormick, All Headers, 1900-Since	29
S538	Milwaukee, Short. All 6-foot Binders, 1890 to 1910	42
J358	Milwaukee, Long. All 6-foot Binders, 1888 to 1910	64½
S551	Milwaukee, Short. All 7-foot Binders, 1892 to 1910	48½
H904	Milwaukee, Long. 8-foot No. 12 Binder, 1907 to 1913	39
H428	Milwaukee, Short, 7-foot and 8-foot No. 12 Binders, 1914 and since	33
K1820	Minneapolis, Short, Gear Drive and Chain Drive, 1888 and since	30½
K1819	Minneapolis, Long, Gear Drive and Chain Drive, 1888 and since	48
J9351	Osborne, Osborne Binders, 1908 and since	35¾
6062	Plano, Short, Jones Lever Binder, 1896 to 1907	32
6063	Plano, Long, Jones Lever Binder, 1896 to 1907	32
A4320	Plano, Long, New and Improved Binders, 1903 and since	36
	Wood, N. C. Harvester, 1903	43⅝
	Wood, N. C. Harvester, 1903	33½

CANVAS SLAT REPAIRERS

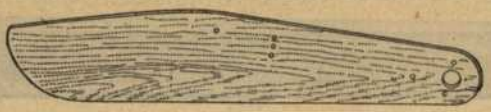
Packed 6 menders in a box, 12 boxes in an attractive counter display carton.
Canvas Slat Repairers.....Per dozen, $0.90

CANVAS SLATS

For Headers and Binders.

½x⅞; 30, 36, 37 and 37½ inches long; bored and countersunk.....Per 100, $12.00
½x⅞; 58 inches long; blank; can be sawed to any required length.....Per 100, $12.00
100 in a bundle. Average weight 58-inch per bundle, 56 lbs.

GRASS BOARDS



All numbers. . . . . Each, $0.90

Will Fit Accurately the Machines for Which They Are Intended.

No.	NAME AND DESCRIPTION
M491B	Acme, Mower, Pony, Acme and Giant, 1908-Since; Vertical, 1913-Since.
3177A	Adriance, Mower, Nos. 5, 7 and 8, 1892-Since
3277	Adriance, No. 10, 1905-Since
H427	Champion, Mower, Draw Cut, 1899-1903; Vertical Lift, 1904-12.
A5039	Champion, Mowers, Draw Cut, 1904-07; New Big Draw Cut, 1905-12.
A5895	Champion, Impd., Vertical Lift and Big Impd., '09-'11
A6208	Champion, Impd., Vertical Lift and Big Impd., 1912
Z5052E	Dain, Mower, 1895-Since
Z5252	Dain, Vertical and Plain Lift, 1915-Since
D1090	Deering, Mower, Ideal, Vert. Lift, Ideal Giant, '97-'03
D1666	Deering, Mower, All Machines, 1903-11
D1598	Deering (Interchanges with D1666), '03-'11
D2702	Deering, California and Giant, '10-'11, all Mowers, 1912
M10W	Emerson, Mower, Standard and New Standard, 1903-Since.
M2200	Independent, Mower, All Machines, 1908-Since
833	Johnston, Mower, Nos. 9 and 10, 1896-1912
834C	Johnston, Nos. 10, 11, 12 and 14, 1911-1913
M327	McCormick, Mower, No. 4, Big 4, New 4, Vertical Lift, New Big 4, 1888-1904
M972	McCormick, New 4, Vertical and New Big 4, '04-'06
MB1051	McCormick, No. 6 and No. 6 Vertical, Big 6, 1914-Since.
PHA307	Milwaukee, Mower, Nos. 5 and 6, 1895-1911 (Replaces PH307).
A258	Milwaukee, Gear Drive, '06-'11
AB258A	Milwaukee, Gear Drive, 1912
J9662	Osborne, Mower, New Osborne, No. 2, Osborne Nos. 1 and 3, 1912-Since.
J82	Osborne, New Osborne, No. 2, '09-'12
7224	Plano, Chain and Gear, '94-'98
7226	Plano, Vertical, Big Vertical and Vertical Jr., '01-'05
JJ1244	Plano, Plain Lift, Big Plain, Vertical, Big Vertical, Vertical Jr., '07-'12.
8219	Wood, Tub, Steel, Giant Admiral, Admiral, '06-'08

Average weight each, 4½ lbs.

GRASS BOARDS COMPLETE WITH IRONS

Will Accurately Fit the Machines for Which They Are Intended.

All numbers. . . . . Each, $1.80

No.	NAME AND DESCRIPTION.
Z5469	Dain-Deere, Mowers, 1920-Since. (Used for Z5252).
D1666	Deering, Mower, All Machines, 1903 to '11
D2702	Deering, Mower, California and Giant, 1910-11; All Mowers 1912 and Since
M972	McCormick, New 4, Big 4, and New Big 4, '04 to '06
MB1051	McCormick, No. 6 and No. 6 Vertical, Big 6, 1914-Since.

Average Weight, Each, 4¾ lbs.

GRASS BOARD STICKS

Not Bored.

To Fit the Above Grass Boards.

Grass Board Sticks. . . . . Each, $0.44

Average weight each, 1¼ lbs.

AUTOMATIC BINDER KNOTTER HOOKS

This hook takes the place of the regular binder knotter hook. It is made of drop-forged steel and will outlast several of the regular hooks which are made of malleable iron.

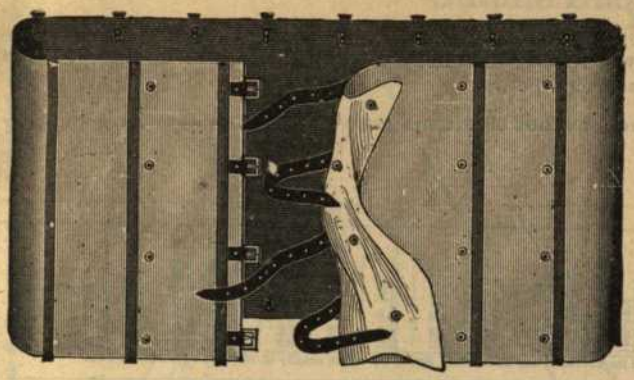
This hook also has a yielding lower jaw, which enables it to handle any size or kind of twine, of any grade, without missing a knot. The farmer can save a great deal on the cost of twine and eliminate the aggravation of loose bundles.

We can furnish these hooks to fit McCormick, Deering and Deere.

Automatic Binder Knotter Hook. . . . . Each, $1.90

BINDER CANVASES

Will Fit Accurately the Machines for Which They Are Intended.



Our canvases are made of a high grade of heavy duck. Good clear, straight slats. In ordering, be sure to give size, name of machine and number of canvas as listed below. We can also furnish canvases for machines not listed below, by shipping direct from factory. In ordering specify name of machine, number of canvas and the dimensions.

Acme	Size, ins.	Each
No. E1333A—Elevator, Upper	96½x42½	7.00
No. E1329A—Elevator, Lower	101 x49½	7.50
No. E1306 —Platform, 6-ft.	137 x43	10.00
No. E1307 —Platform, 7-ft.	161 x43	11.50
No. E1308 —Platform, 8-ft.	185 x43	13.00
Acme Queen Binder		
No. V571—Elevator, Upper	99 x44	7.00
No. V572—Elevator, Lower	104½x51½	7.50
No. V569—Platform, 6-ft.	135 x41¾	10.00
No. V570—Platform, 7-ft.	158 x41¾	11.50
Champion Force Feed		
No. P135—Elevator, Upper	92 x55	7.50
No. P134—Elevator, Lower	78 x55	7.00
No. P176—Platform, 6-ft.	137 x43¾	10.00
No. P177—Platform, 7-ft.	157 x43¾	11.50
New Champion		
No. K1281—Elevator, Upper	102 x55	7.50
No. K1280—Elevator, Lower	87 x55	7.00
No. K1283—Platform, 6-ft.	138 x48½	10.00
No. K1284—Platform, 7-ft.	156 x48½	11.50
Deere		
No. HZ9044—Elevator, Upper	93 x47	7.00
No. HZ9043—Elevator, Lower	97 x51	7.50
No. HZ9040—Platform, 6-ft.	136 x44¾	10.00
No. HZ9041—Platform, 7-ft.	160 x44¾	11.50
No. HZ9042—Platform, 8-ft.	184 x44¾	13.00
Deering Jr. and Improved Steel		
No. E1552—Elevator, Upper	95½x54½	8.50
No. E1552—Elevator, Lower	95½x54½	8.50
No. E1550—Platform, 6-ft.	141½x47½	11.00
No. E1551—Platform, 7-ft.	166 x47½	12.50
No. E1549—Butter	52½x 7¾	1.75

Deering Ideal	Size, ins.	Each
No. HA1774—Elevator, Upper	90 x43	7.00
No. HA1775—Elevator, Lower	89 x50⅜	7.50
No. HA1772—Platform, 6-ft.	133½x43¾	10.00
No. HA1773—Platform, 7-ft.	157½x43¾	11.50
No. HA2791—Platform, 8-ft.	183 x43¾	13.00
No. HA2207—Butter	52½x 7¾	1.75
No. HA4562—Elevator, Upper	90 x47	7.00
McCormick Open Elevator R. H.		
No. VA224—Elevator, Upper	95½x41¾	7.00
No. VA226—Elevator, Lower	100¼x51	8.25
No. VA229—Platform, 6-ft.	135 x38¼	10.00
No. VA230—Platform, 7-ft.	159 x38¼	11.50
McCormick New Open Elevator		
No. BB65 —Elevator, Upper	91 x47¼	7.00
No. BA66 —Elevator, Lower	97 x51	7.50
No. BA835—Elevator, Lower	89 x51	7.50
No. BA467—Platform, 6-ft.	134 x45	10.00
No. BA468—Platform, 7-ft.	158 x45	11.50
No. BA469—Platform, 8-ft.	182 x45	13.00
No. T477—Adjuster	48 x 7½	1.75
Milwaukee No. 10		
No. S400—Elevator, Upper	96 x52½	8.25
No. SA401—Elevator, Lower	92 x52½	7.50
No. SA402—Platform, 6-ft.	136 x42½	10.00
No. SA404—Platform, 7-ft.	160 x42½	11.50
No. H518—Butter	49 x 8	1.75
Milwaukee No. 12		
No. SL812—Elevator, Upper	90 x42½	7.00
No. SL813—Elevator, Lower	90 x47¾	7.00
No. SP817—Platform, 6-ft.	134 x42⅝	10.00
No. SM818—Platform, 7-ft.	158 x42½	11.50
No. SM819—Platform, 8-ft.	182 x42½	13.00
Osborne		
No. CA2002—Elevator, Upper	79 x40¼	7.00
No. CA2003—Elevator, Lower	82 x48½	7.50
No. CA2008—Platform, 6-ft.	134 x42¾	10.00
No. CA2009—Platform, 7-ft.	158 x42¾	11.50
Plano		
No. 5656—Elevator, Upper	91½x47⅛	7.00
No. 5655—Elevator, Lower	94½x51¼	7.50
No. 5668—Platform, 6-ft.	138 x36	10.00
No. 5671—Platform, 7-ft.	161 x36	11.50
No. 5650—Butter	43½x 7½	1.75

HEADER CANVASES

Shipped from Factory Only, Chicago, Ill.

Acme Header	Size, ins.	Each
No. AH501B—Elevator, Upper	254 x36	20.00
No. AH498B—Elevator, Lower	261 x36	21.00
No. AH491 —Platform	326 x36	24.00
Deering Header		
No. 2336—Elevator, Upper	215½x35¾	16.00
No. 2355—Elevator, Lower	226 x35¾	24.00
No. 2436—Elevator, Upper	246½x35¾	17.50
No. 2437—Elevator, Lower	253 x35¾	18.50
No. 2050—Elevator, Upper	246 x39½	18.50
No. 2050—Elevator, Lower	246 x39½	18.50
No. 1383—Platform (Push)	284 x41½	24.00
No. 2335—Platform, 12-ft.	318 x37½	24.00
No. 2427—Platform, 14-ft.	368 x37½	27.00

McCormick Push Binder	Size, ins.	Each
No. J1621—Elevator, Upper	217⅛x41	17.00
No. J1622—Elevator, Lower	225¾x41	18.00
No. J640 —Platform, 12-ft.	293½x41⅜	24.00
McCormick Header		
No. J146—Elevator, Upper	209⅛x37	15.50
No. J144—Elevator, Lower	218½x37	16.50
No. J207—Elevator, Upper	245⅛x37	18.00
No. J208—Elevator, Lower	253¾x37	19.00
No. J142—Platform, 12-ft.	318 x37½	24.00
No. J210—Platform, 14-ft.	366 x37½	27.00

WHITE DUCK FOR CANVASES

Practically the same grade and weight as used in our Binder Canvases. It is suitable for making up special sizes of Binder or Header Canvases.

Furnished in weights Nos. 1 to 12 and in all regular widths from 26 to 144-inch, 100 lineal yards in a roll.

In full rolls . . . . . Per yard, Market
In cut lengths . . . . . Per yard, Market

BUCKLES FOR CANVASES

These Buckles are the same as regularly used on our canvases. Furnished complete with clip. Packed 2 dozen in a box.

1⅛-inch . . . . . Per gro., $11.40
1¼-inch . . . . . Per gro., $13.00
1½-inch . . . . . Per gro., $14.00
2 -inch . . . . . Per gro., $16.50

MACHINE EXTRA CHART

This chart is prepared as a help in ordering Machine Extras.

Notice at the top a list of various machines for which there is most demand, and to the left side the parts most staple. This enables you to determine which numbers are used together.

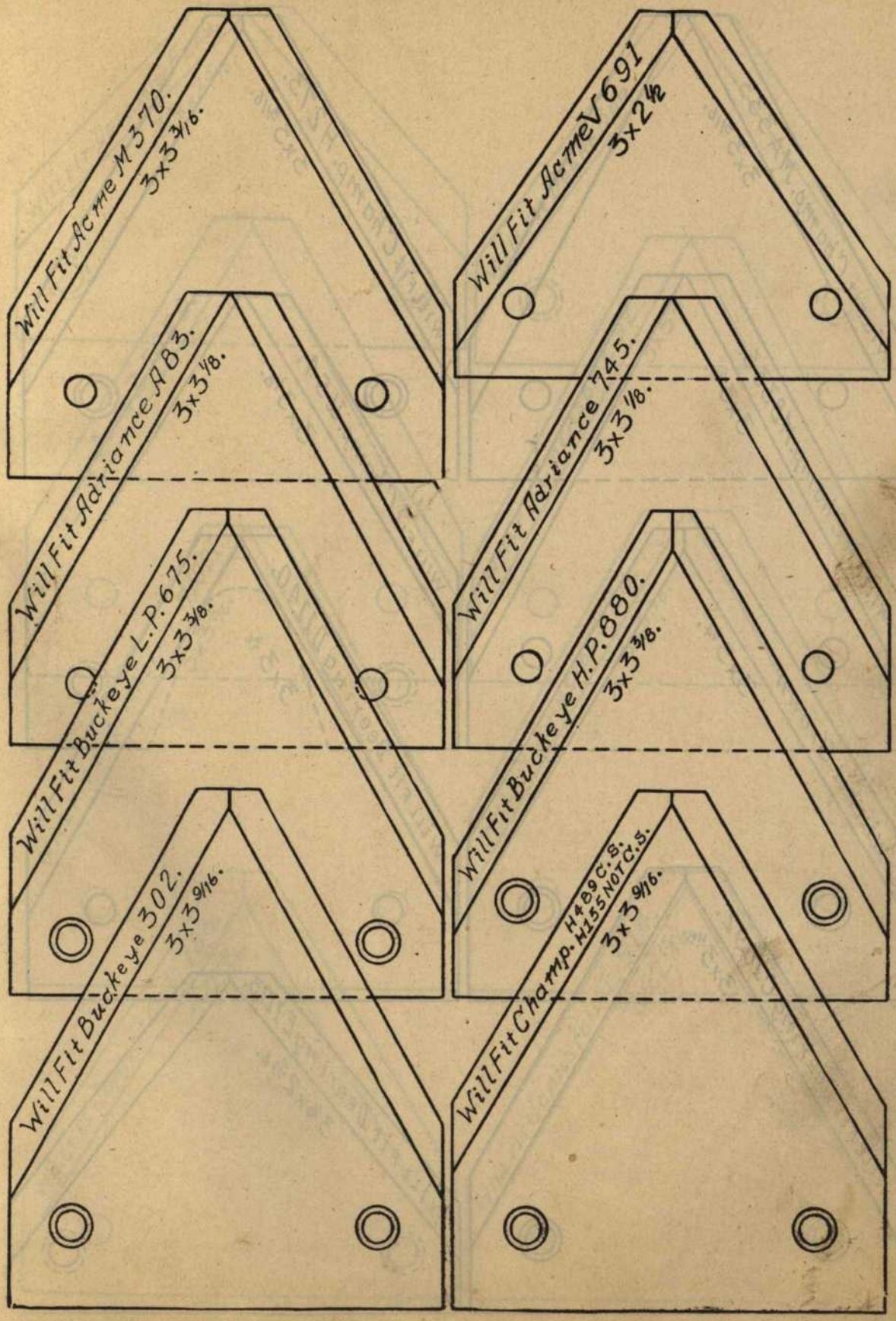
It is but natural the staple numbers will vary in different sections, but the items shown are the ones most commonly used throughout the Southwest.

FOR MOWERS	Acme Mower, 1901 and Since	Adriance Mower, 1897 and Since	Buckeye Mower, 1905 and Since	Champion Mower, 1885 to 1904	Champion Mower 1904 to 1909.	Champion Mower, 1909 and Since	Crown Thomas Mower	Dain or Deere 1885 to 1918	Dain or Deere 1919 and Since	Deering Mower Wood Pitman 1906 and Since	Deering Mower Iron Pitman 1895-1904	Emerson Standard Mower 1900 and Since	Johnston Mower, 1896 to 1909	Johnston Mower 1909 and Since	McCormick Mower, 1888 to 1912	McCormick Mower, 1913 to 1917.	McCormick Mower, 1918 and Since	Massey-Harris, 1916 and Since	Milwaukee Mower, Main Line 1898 and Since	Osborne Mower, 1905 and Since	Wood Mower, 1891 to 1908	Wood Mower, 1903 to 1909	Wood Mower, 1909 and Since
Complete Knives	In ordering Complete Knives, be sure to give us the length, number of sections, and the number of the knife head. Mower knives are usually 18, 20, 24, 28 or 32 sections long. 4½ ft., 5 ft., 6 ft., 7 ft.,or 8 ft. cut.)																						
Size of Section	3x3¼	3x3¼	3x3¼hp	3x3¼	3x3¼	3x3¼	3x3¼	3x3¼	3x3¼	3x3¼	3x3¼	3x3½	3x3½	3x3½	3x3½	3x3¼	3x3¼	3x3½	3x3½	3x3½	3x3¼	3x3½	3x3½	3x3½
Knife Head	T6	557F	864	A415X	A870	A5792	6	Z45E	Z45A	D463	P123	M203	919	2211	M139	M139	MA139	M1708	PG6	K774	1680	2479	2862
Guard	T2 or T2B	3087C	775	A811	A881	AA881	03	Z1E or Z5	Z439	D698	D442	M504 or M527	897 or 1811	1811	M462	MA989	MD989	M765	PK5	K790	A	2355	L
Guard Plate	M369	716½B	885	H253	H253	H253	1046	Z1E or Z5062	Z5110	D1739	D1043	Z85 or M186S	912	912	M219½	MA990	MA990	M2082	P201S	11565	3467	7166	9571
Section Rivet	½x5/16 B.H.	½x5/16 B.H.	½x6 C.S.	½x5/16 B.H.	½x5/16 B.H.	½x5/16 B.H.	½x6 B.H.	½x5/16 B.H.	½x5/16 B.H.	½x5/16 B.H.	½x5/16 B.H.	½x5/16 B.H.	½x5/16 B.H.	½x5/16 B.H.	½x5/16 B.H.	½x5/16 B.H.	½x5/16 B.H.	½x5/16 B.H.	½x5/16 B.H.	½x5/16 B.H.	½x6 C.S.	½x6 C.S.	½x6 C.S.
Knife Head Rivet	½x5/16 B.H.	½x5/16 B.H.	½x6 C.S.	½x5/16 B.H.	½x5/16 B.H.	½x5/16 B.H.	1x5/16 B.H.	½x5/16 B.H.	½x5/16 B.H.	½x5/16 B.H.	1x5/16 B.H.	1x5/16 B.H.	1x5/16 B.H.	1x5/16 B.H.	½x5/16 B.H.	½x5/16 B.H.	½x5/16 B.H.	½x5/16 B.H.	½x5/16 B.H.	½x5/16 B.H.	½x5/16 C.S.	½x5/16 C.S.	½x5/16 C.S.
Guard Plate Rivets	Guard Plate Rivets measure 15/16x6, 1¼x6, and 1¾x5½, all countersunk head. With these sizes you can fill any call you may have. Packed one Pound in a package.																						
Pitman Rivets	There are four lengths of Pitman Rivets, ¼x1¾, ¼x2, ¼x2¼ and ¼x2½ Round Head. With these sizes you can fill any call you may have. Packed one Pound in a package.																						
Knife Clip	T4	3093	857	A467	A886	A1155	317	Z6E	Z5628	P94	P94	M503	1814	1814C	M463	M1000	MD1000	M565	PJ1	K665	171	1271	2863
Knife Guide—Front	T79	3084	None	A796	A816	None	10	Z30E	Z5408	D467	D467	M467	1821	1885	M290	M1239	M290	Cannot Furnish	PH2	K494	Cannot Furnish	Cannot Furnish	2781
Knife Guide—Rear	T27A	3086	None	A694	A890	None	B40	Z32E	Z32E	D595	D595	M505	926	926	M652	MA652	MA652	Cannot Furnish	PM3	K792	1711	2593	2959
Wear Plate—Under Clip	M213A	3094C	None	H282	H282	A5858	08¾ G'rd R'l	Z5064	Z5414	D1038	D1038	Z152 G'rd R'l	909	1813	M468	M468	MA1052	M2277	PK156	9968	3464	7168	9575
Wear Plate—Under Cap	M215	None	677½	H315	H315	A5857	1091	Z5063	Z5415	D1455	D1040	M66S	904	904	M490	MA490	MA 1263	M2278	PG157	9967	4557	5447½	8933
Pitman, with Bolts No Box	M243A	3032H	Cannot Furnish	Cannot Furnish	Cannot Furnish	Cannot Furnish	1069	Z5076	Z5076	D1471 D2907	Cannot Furnish	Z397	1841	2228	M392	M392	M392	M5168	PV290	J9439½	7170	8225	8965
Pitman Wood	M244	3033H	None	H504	H504	H504	1071	Z5050	Z5050	D1470	None	Z182	1098	2223	M393	M393	M393	M5167	PV301	J9439	7170	8225	8965
Pitman Straps, Knife End	M142 M143	600E 601E	None	Cannot Furnish	Cannot Furnish	Cannot Furnish	55 56	Z220 Z225	Z220 Z225	D893 D894	None	M417 M418	715¼ 715¼	2208C 2209C	M147 M304	M147 M304	M147 M304	M1701 M1702	PM34 PM35	8131 8132	2299 2300	2300 2306	2853 2964
Pitman Straps, Box End	M144 M145	605C 2 used	None	Cannot Furnish	Cannot Furnish	Cannot Furnish	57 2 used	Z226 2 used	Z226 2 used	D607 2 used	None	M416 2 used	216 2 used	2210 2 used	M315 M316	M315 M316	M315 M316	M557	PL9 PL9½	8130 2 used	2297 2298	2297 2298	2834 2835
Pitman Box	T12	61D or 61K	88	A747 A748-9	A747 B683½	A1139 A1134-5	25	Z162	Z205	D711	D334	M472	1011	2207	M317	M317	M317	M574	PJ50	KA1158	A2301	A2301	2941
Crank Shaft Bushings	Cannot Furnish	Cannot Furnish	Cannot Furnish	Cannot Furnish	Cannot Furnish	Cannot Furnish	Cannot Furnish	Z94E Ft Z97E Rr	Z94E Ft Z97E Rr	D347 Ft D573 Rr	D 47 Ft D573 Rr	Cannot Furnish	Cannot Furnish	Cannot Furnish	M308 Ft M343 Rr	M308 Ft M343 Rr	M424Ft M443Rr	Cannot Furnish	Cannot Furnish	Cannot Furnish	Cannot Furnish	Cannot Furnish	Cannot Furnish
Pitman Bolt, Knife End	M414	602A	None	H442	H609	A5834	1004	Z5040	Z5040	D2591 D3079	None	Z381	1062	2251	M483	M483	M483	M1706	PG175	9559½	A2148	A2148	A2148
Pitman Bolt, Box End	M413A	607A	619	None	None	None	1005	Z5035	Z5035	D2592 D3078	None	Z382	1018	2252	M483½	M483½	M483½	None	PG175	9960½	6916½	6916½	9534
Pitman Spring, Knife End	M470	601½A	None	H441	H610	A5705	1112	59S	None	D1151	None	Z660	1017	1017	M484	M484	M484	M1704	PG171	9848	7175	7175	8924
Pitman Spring, Box End	None	Cannot Furnish	None	H444	H624	None	None	49S	49S	None	None	Z661	1016	1016	M484½	M484½	M484½	M1705	PG170	9847	None	None	None
Wrist Pin	M99 or M99A	159A	None	H347	A5146	A5146	58	Z5031	Z5031	D1241	None	M132S	129	129C	M90	M90	M90	Cannot Furnish	PJ172	9835	7171	7171	8928
Wrist Pin Nut	None	Ad-riance	None	A744	None	None	14	Z73	Z73	D471	None	Cap Screw	None	Cap Screw	M91½	M91½	M91½	Cannot Furnish	Cap Screw	K909	2302	2302	2302
Awl	T88	3506B	Cannot Furnish	A704	A704	A704	43	Z14	Z14	D500	D500	M500	8P	8P	M294R M295L	M294R M295L	M294R M295L	M4L M5R	PR25	K932L K934R	2162½	2162½	2749
Awl Spring	M537A	3507	B'ckeye	A85	A85	A85	1081	55S	55S	76	76	Z60	19½	19½	M296	M296	M296	M139	PR171	97X	8235	8235	8235
Swath Board	M491B	3177A	Cannot Furnish	H427	H427	A6208	1085	Z5052E	Z5252	D1666	D1090	M49W	833	833	M327	MB1051	MB1051	Cannot Furnish	PH307	J9662	8219	8219	8219
Swath Stick	For all makes. We furnish sticks not bored, which can be fitted to any machine.																						
Bevel Gear	T107	Cannot Furnish	Cannot Furnish	Cannot Furnish	Cannot Furnish	Cannot Furnish	301 20	Z125	Z125	D356 D864	D574	M404	Cannot Furnish	Cannot Furnish	M813	M813	MA 1407	Cannot Furnish	PJ16	Cannot Furnish	Cannot Furnish	Cannot Furnish	2525
Bevel Pinion	T9	Cannot Furnish	Cannot Furnish	A758	A758	Cannot Furnish	65	Z130	Z130	D458 D865	D575	M522	Cannot Furnish	Cannot Furnish	M635	M635	MA 1408	Cannot Furnish	Cannot Furnish	Cannot Furnish	Cannot Furnish	Cannot Furnish	2791
Bevel Pinion	None	Cannot Furnish	Cannot Furnish	A705	A705	Cannot Furnish	Cannot Furnish	Cannot Furnish	Cannot Furnish	D730 D840	Cannot Furnish	M499 Spur Gear	Cannot Furnish	Cannot Furnish	M633	M633	M1406	Cannot Furnish	Cannot Furnish	Cannot Furnish	Cannot Furnish	Cannot Furnish	2790
Clutch	None	Cannot Furnish	Cannot Furnish	Cannot Furnish	Cannot Furnish	Canno Furnish	Cannot Furnish	Cannot Furnish	Cannot Furnish	Canno Furnish	Cannot Furnish	Cannot Furnish	Cannot Furnish	Cannot Furnish	M814	MA814	M1400	Canno Furnish	Cannot Furnish	Cannot Furnish	Cannot Furnish	Cannot Furnish	1665
Shoe Plates	For all makes. State name of machine, also whether for outside or inside shoe.																						
Pitman Sections	For all makes. State name of machine, or send pencil diagram																						
Pitman Shaft	Deering D1252 D1880 and D2221 and McCormick M644 and M792 only. Specify Diameter and Length																						
Guard Bolts	For all makes. State if long or short bolts are wanted Long bolt passes through the bar, guard, clip and wear plate. Short bolt passes through guard and bar only. State number of guard.																						
Mower Tongues	In the white. Can be fitted to any make of Machine.																						

This chart has been compiled with the greatest of care, but should any errors be found we would greatly appreciate our customers telling us of them so they may be corrected.

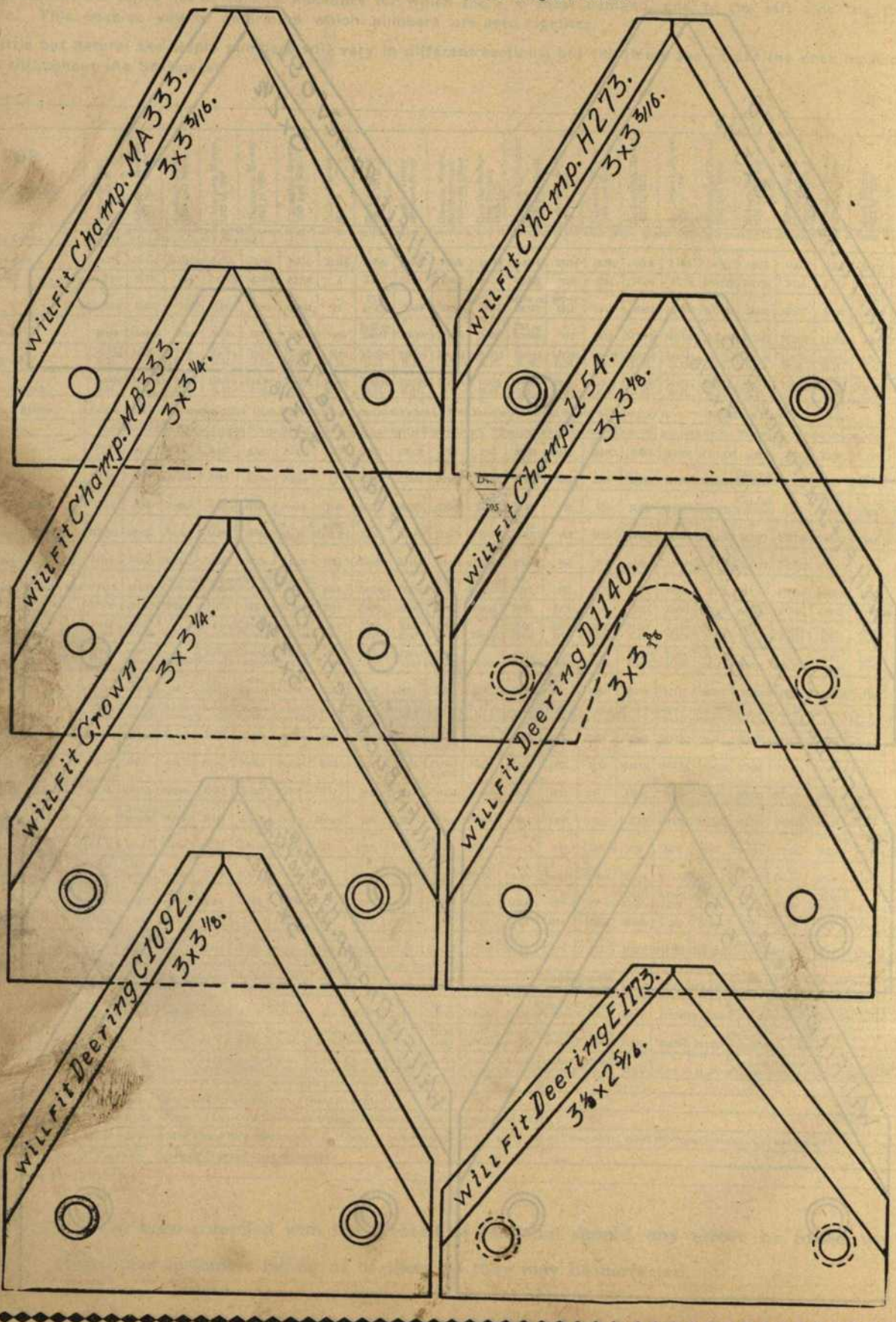
Outline Diagrams of Sections

For List of Patterns, see Pages 704-706.



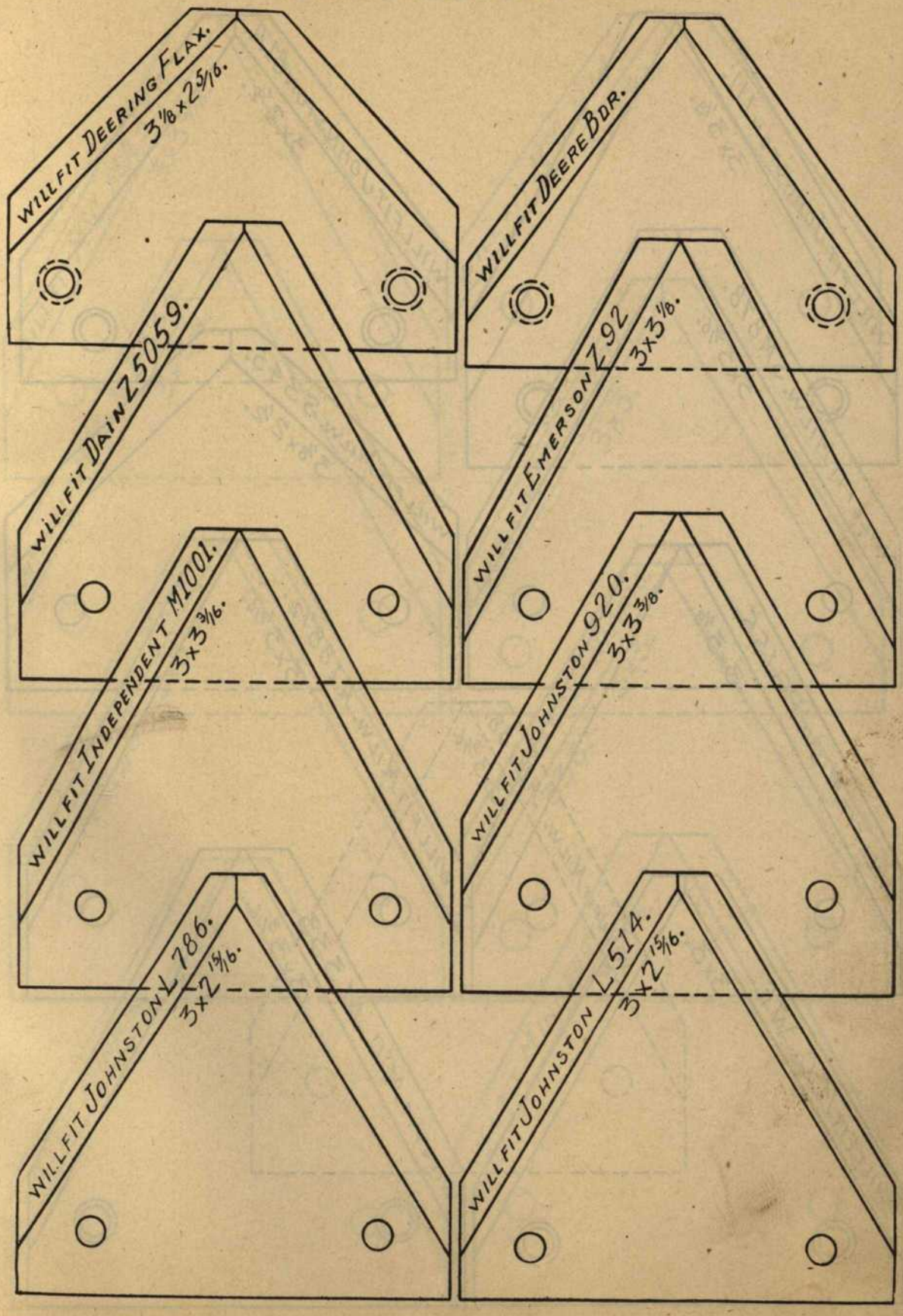
Outline Diagrams of Sections—Continued

For List of Patterns, see Pages 704-706.



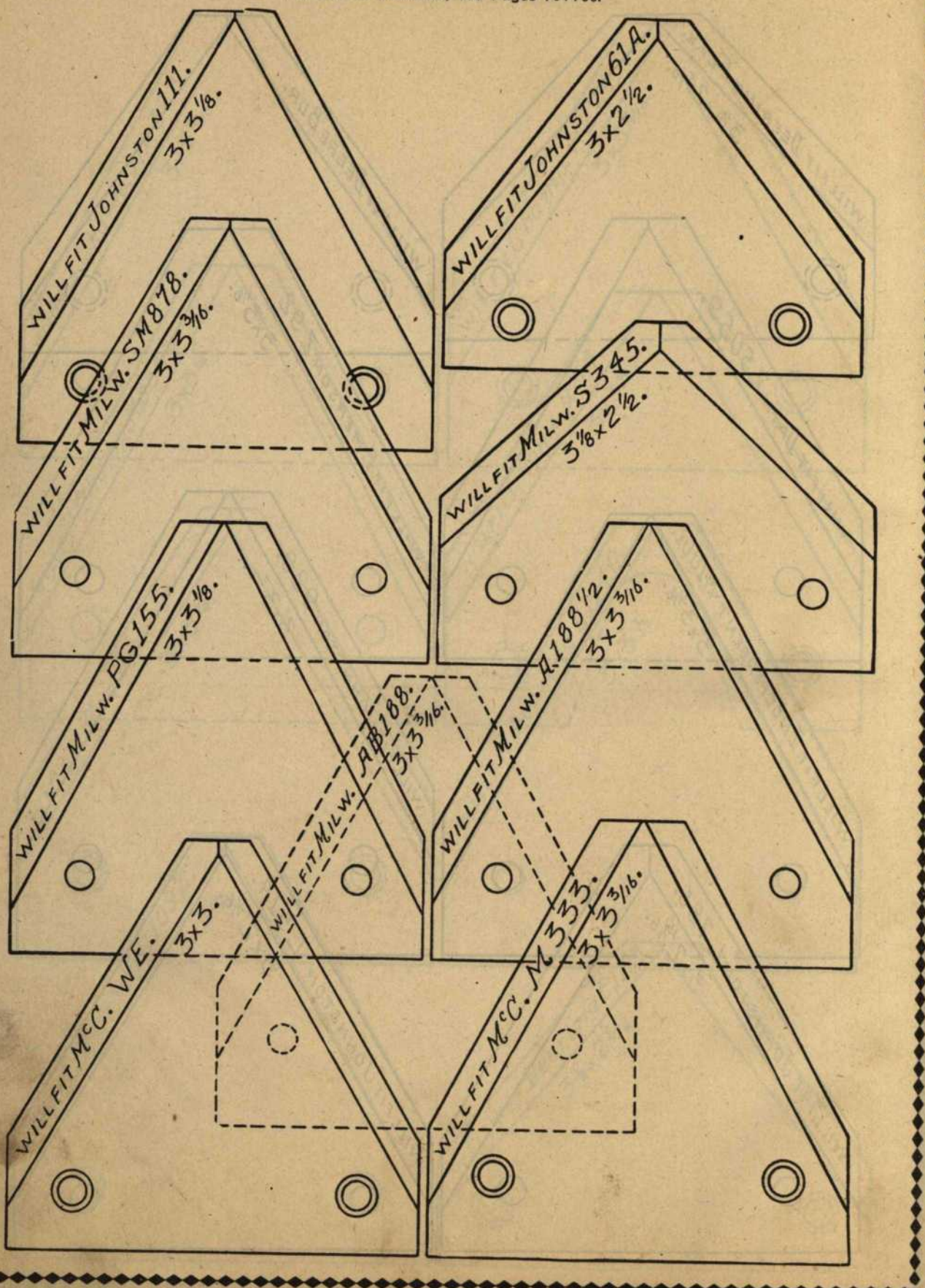
Outline Diagrams of Sections—Continued

For List of Patterns, see Pages 704-706.



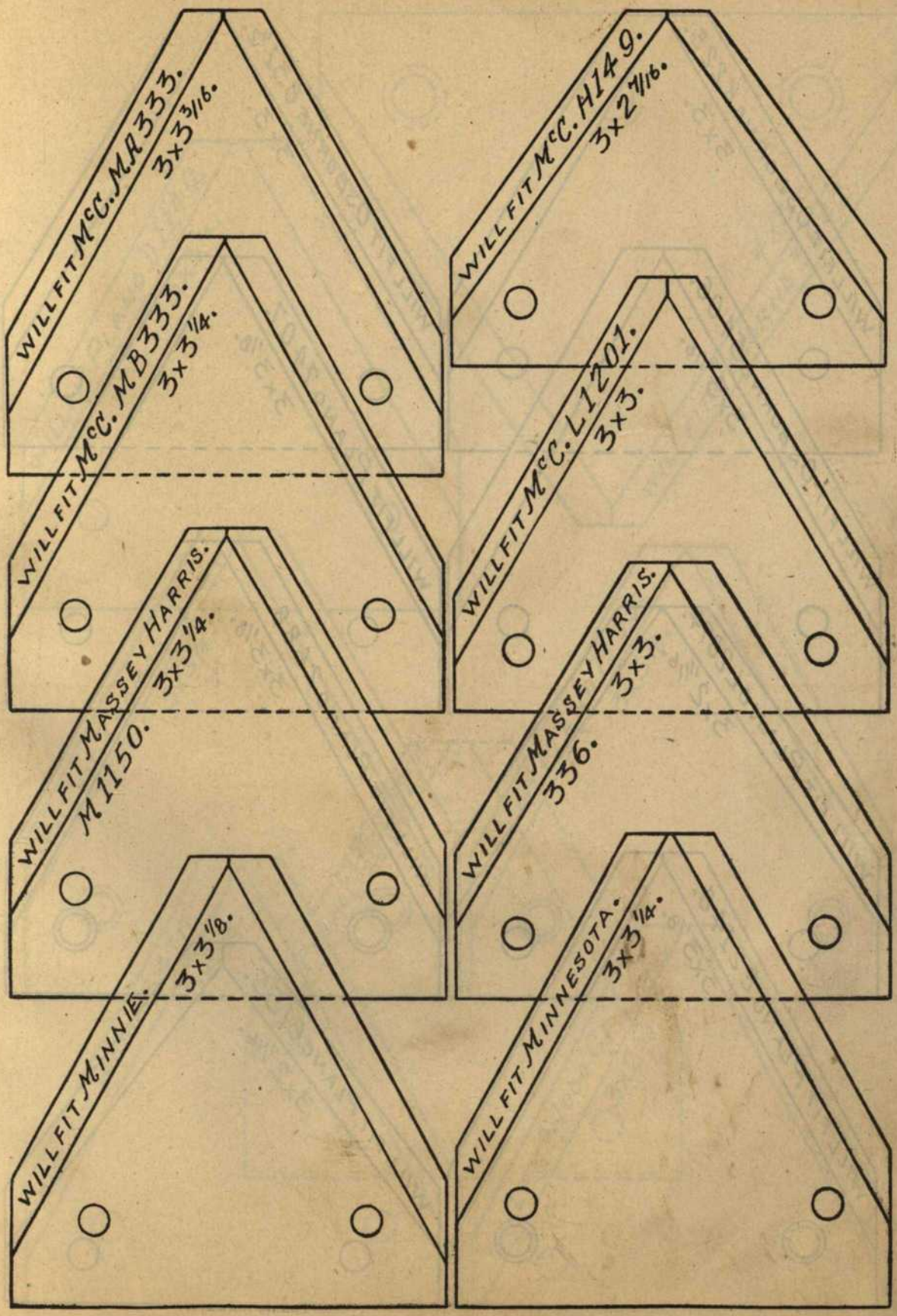
Outline Diagrams of Sections—Continued

For List of Patterns, see Pages 704-706.



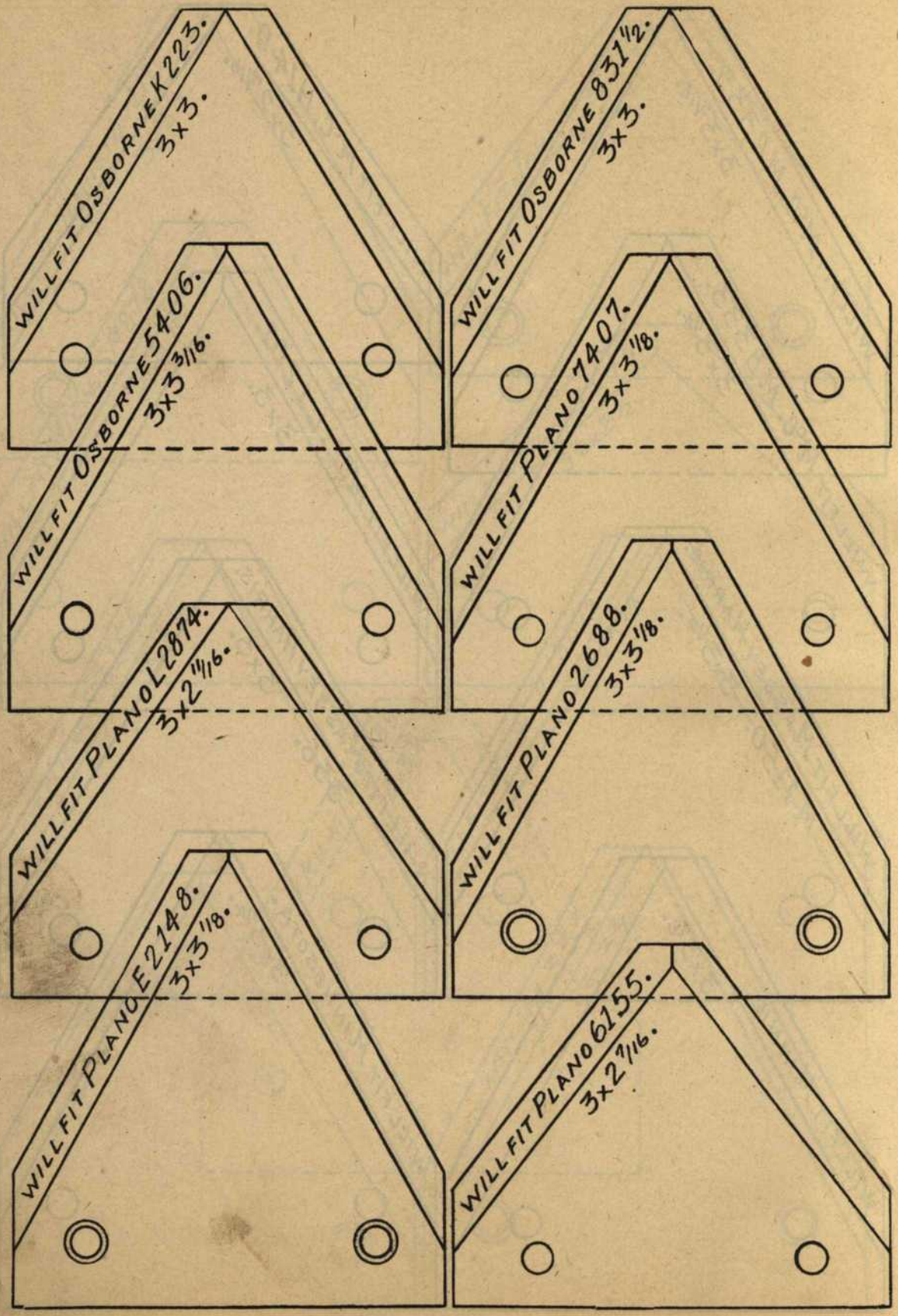
Outline Diagrams of Sections—Continued

For List of Patterns, see Pages 704-706.



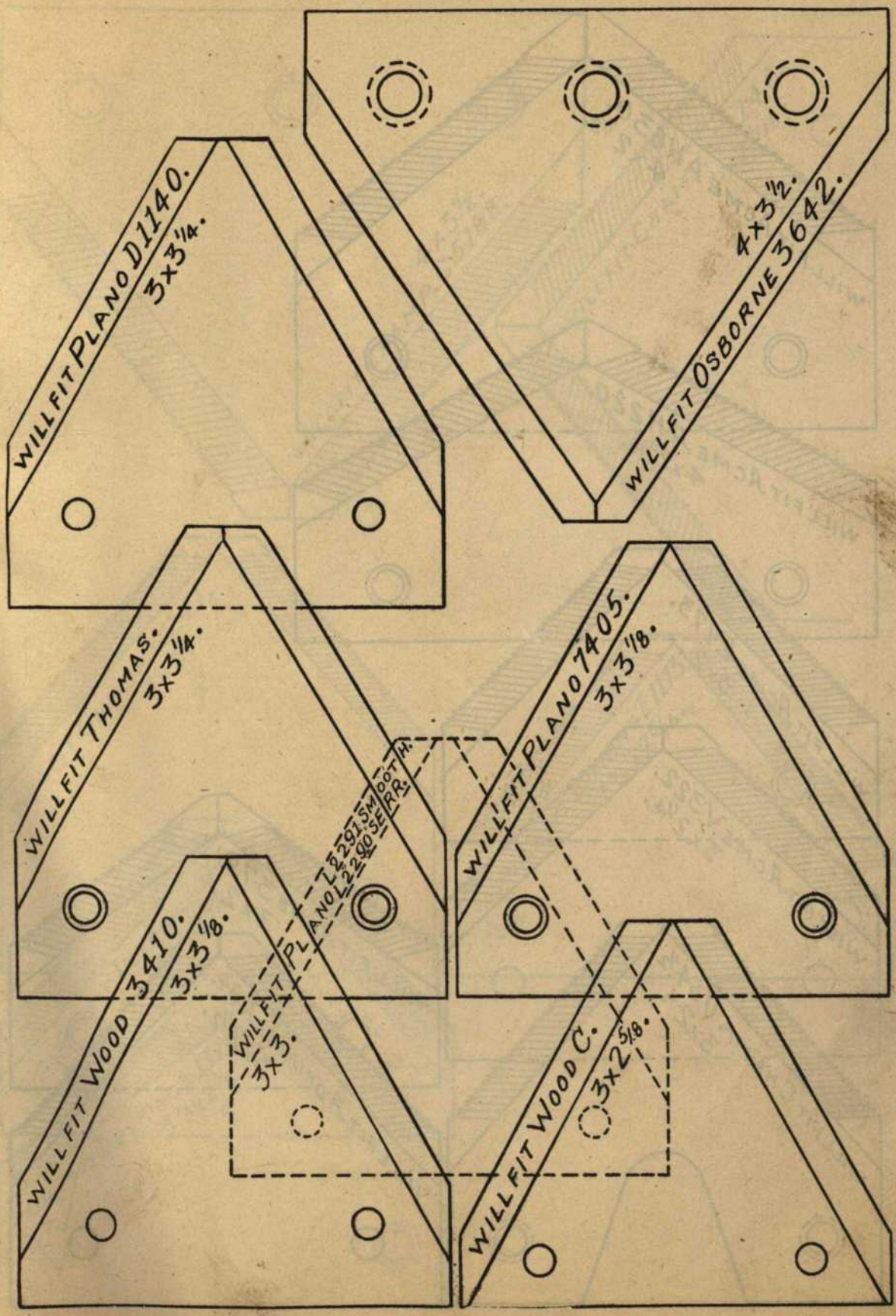
Outline Diagrams of Sections—Continued

For List of Patterns, see Pages 704-706.



Outline Diagrams of Sections—Continued

For List of Patterns, see Pages 704-706.



Outline Diagrams of Sections—Continued

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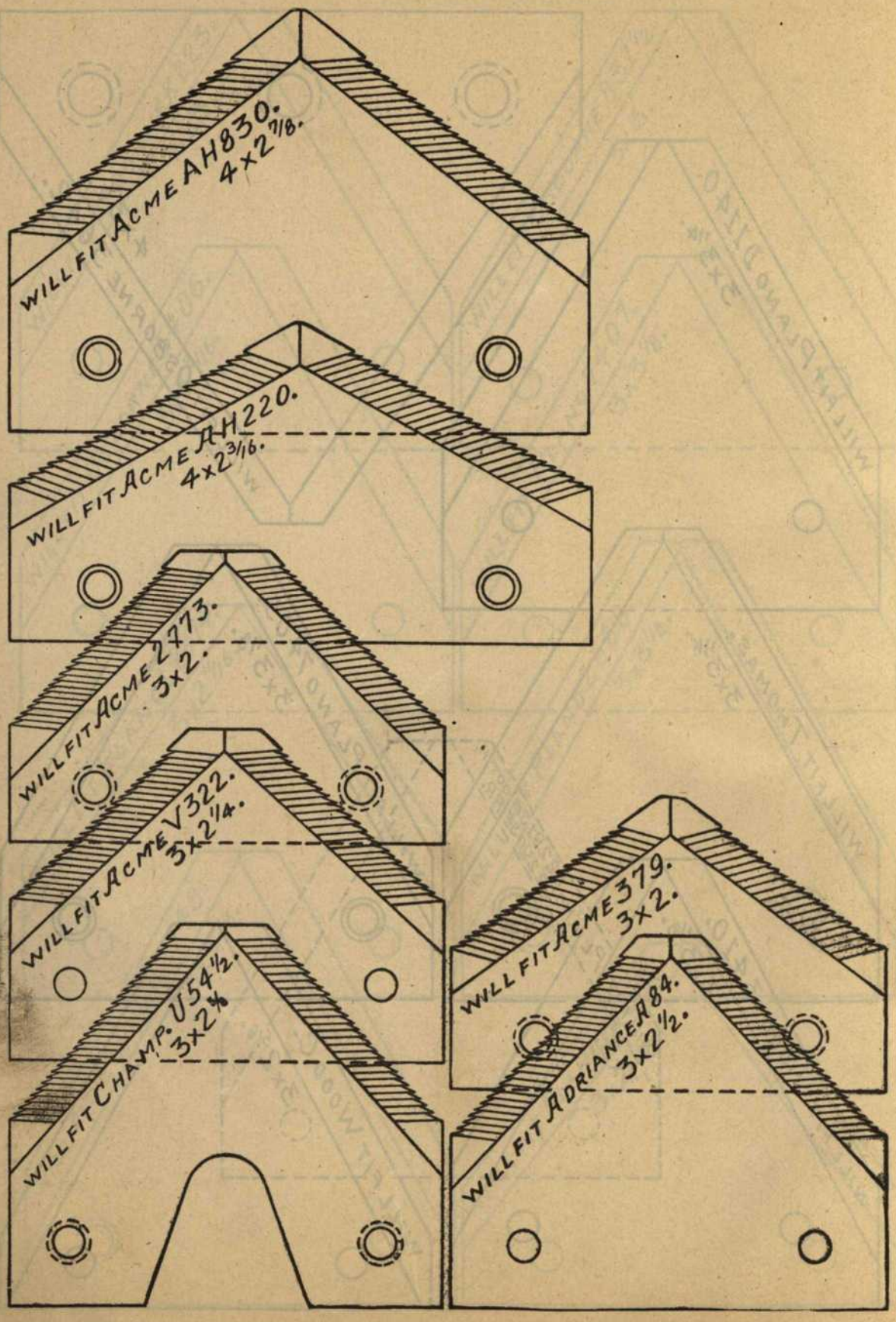
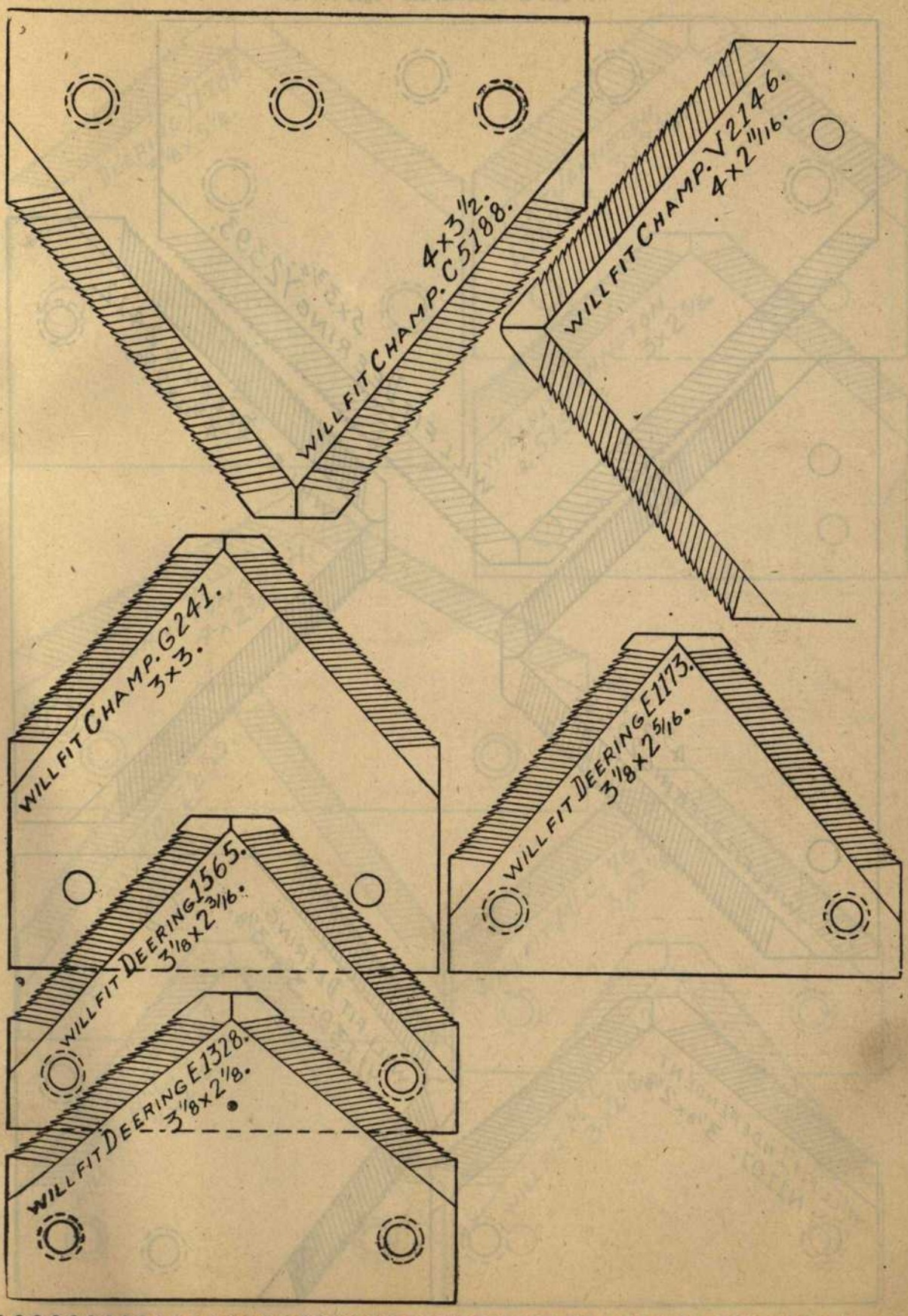


Outline Diagrams of Sections—Continued

For List of Patterns, see Pages 704-706.



Outline Diagrams of Sections—Continued

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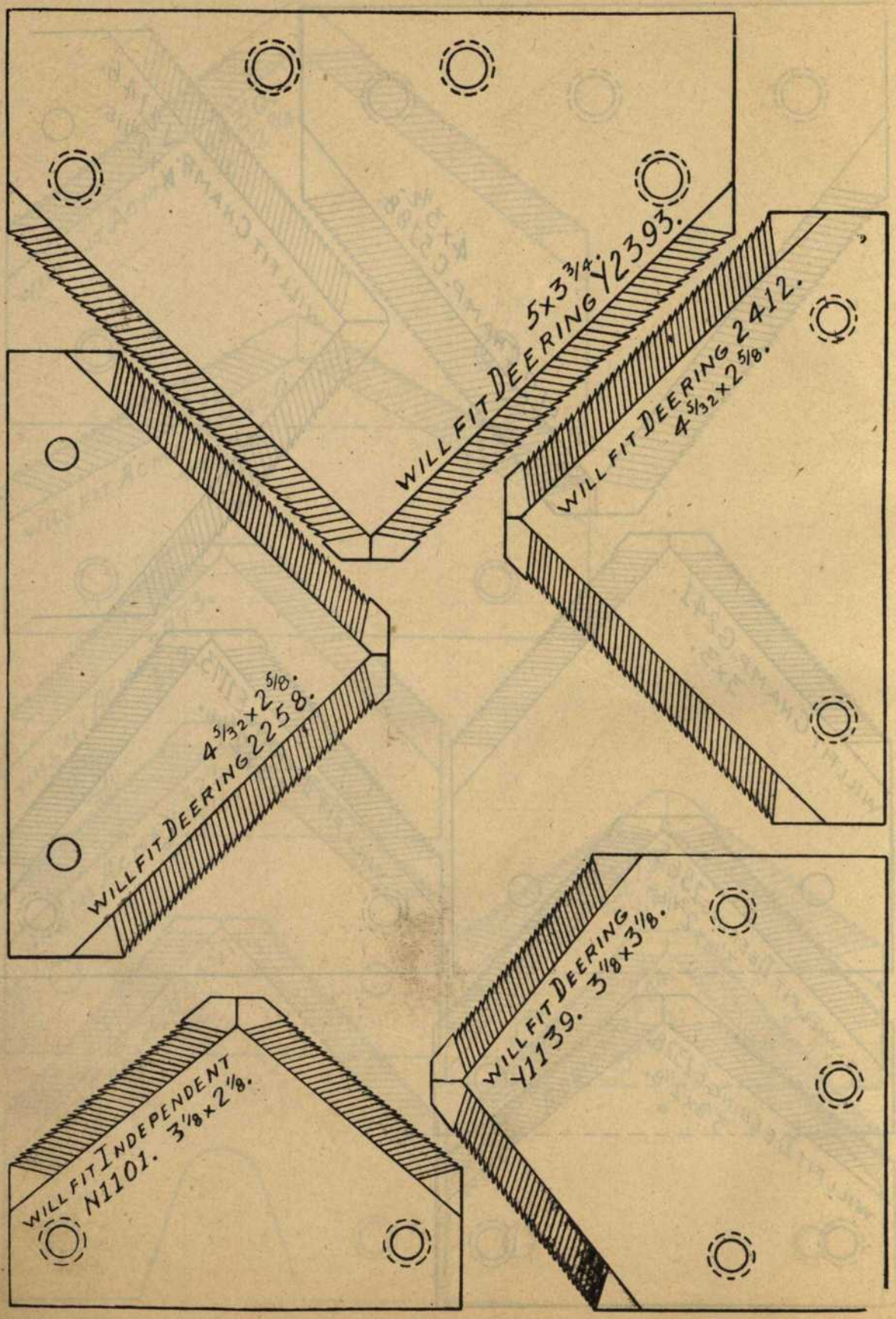

Outline Diagrams of Sections—Continued

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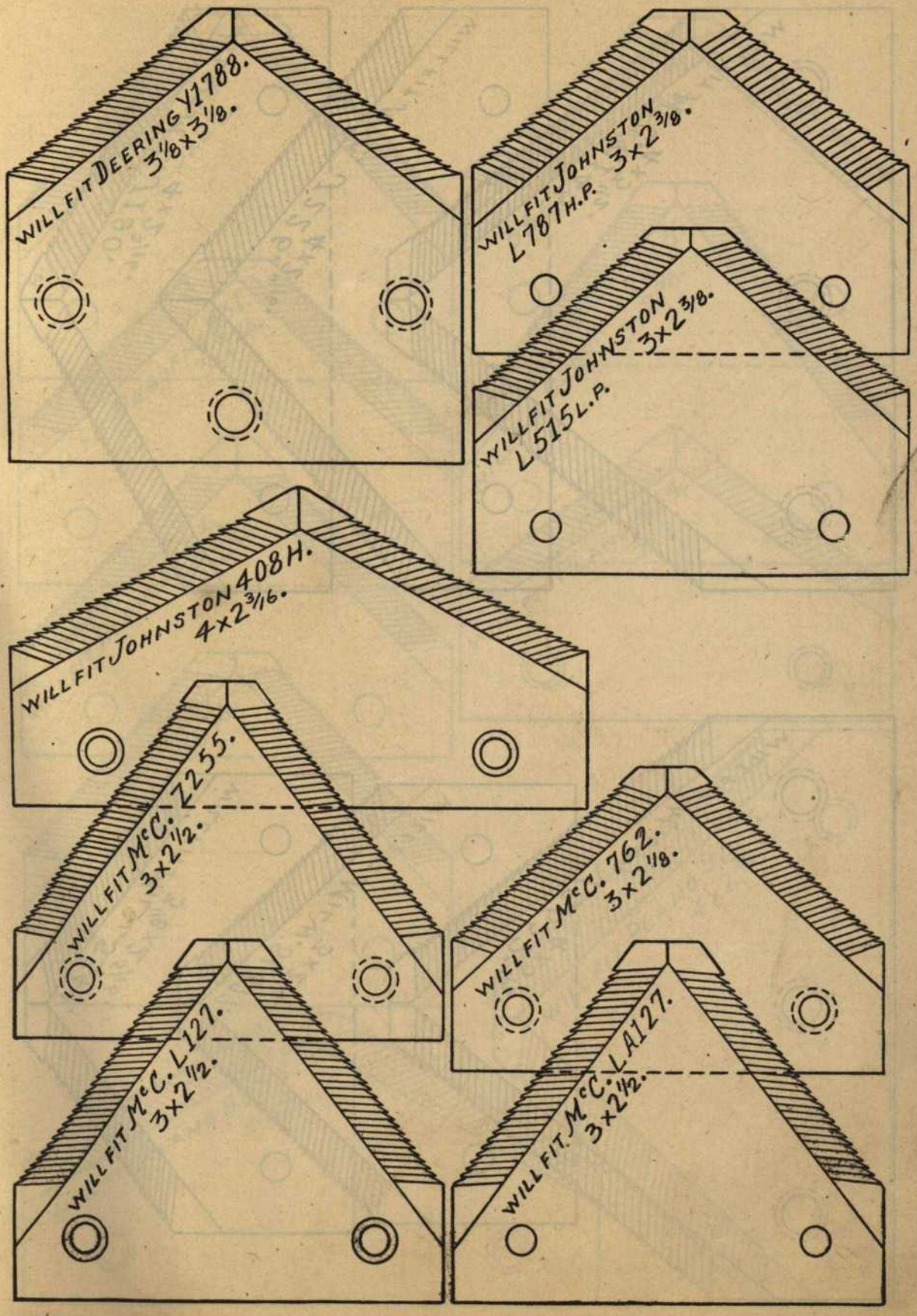

Outline Diagrams of Sections—Continued

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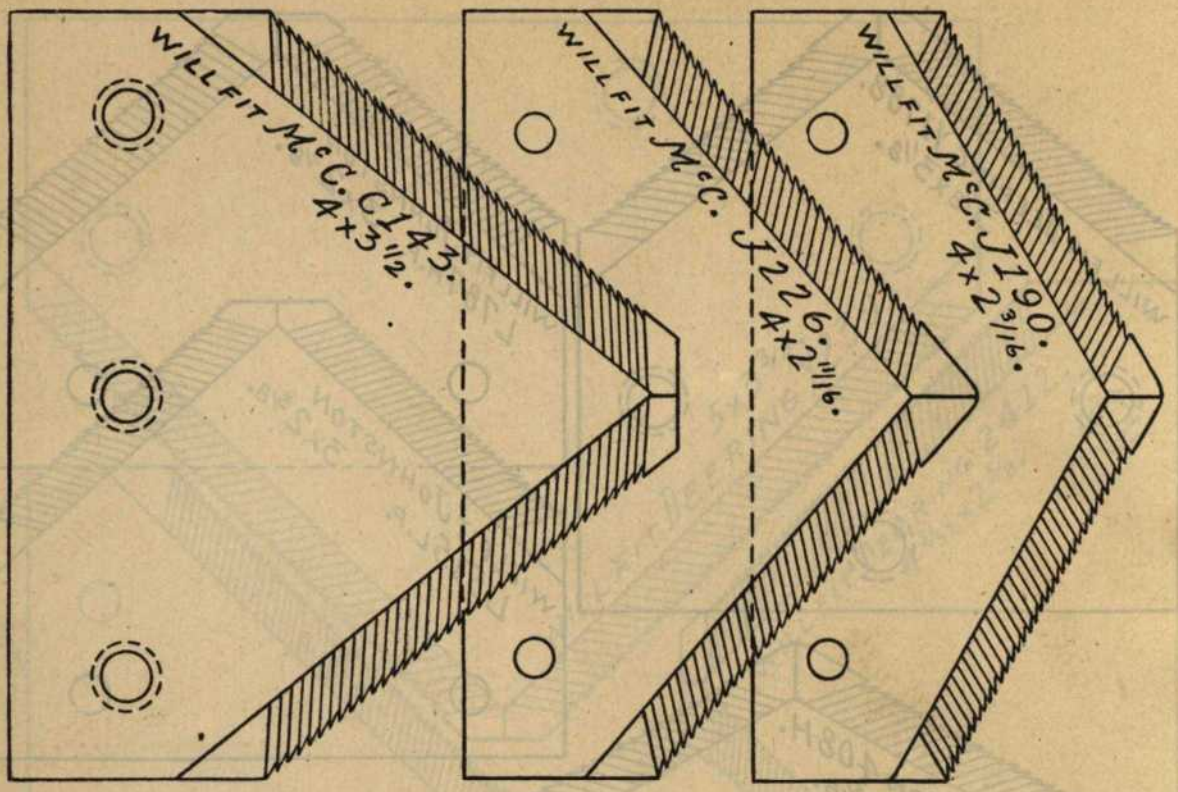
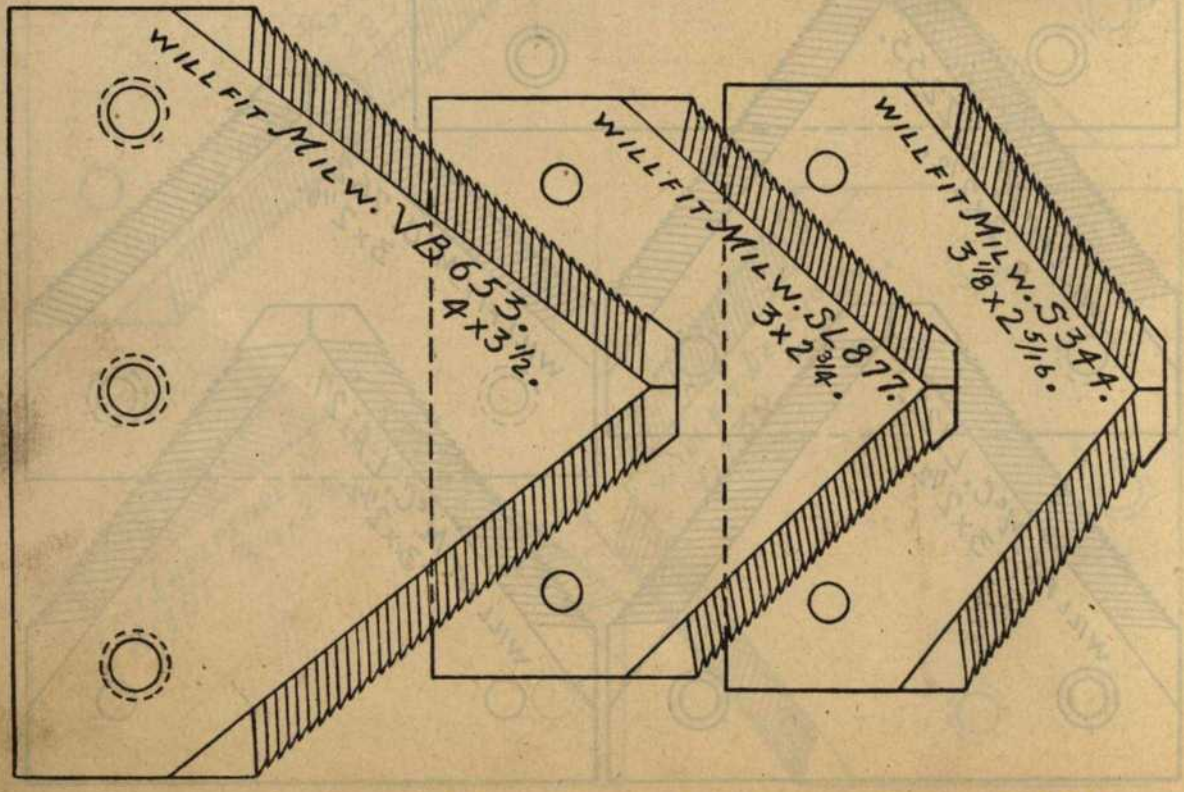
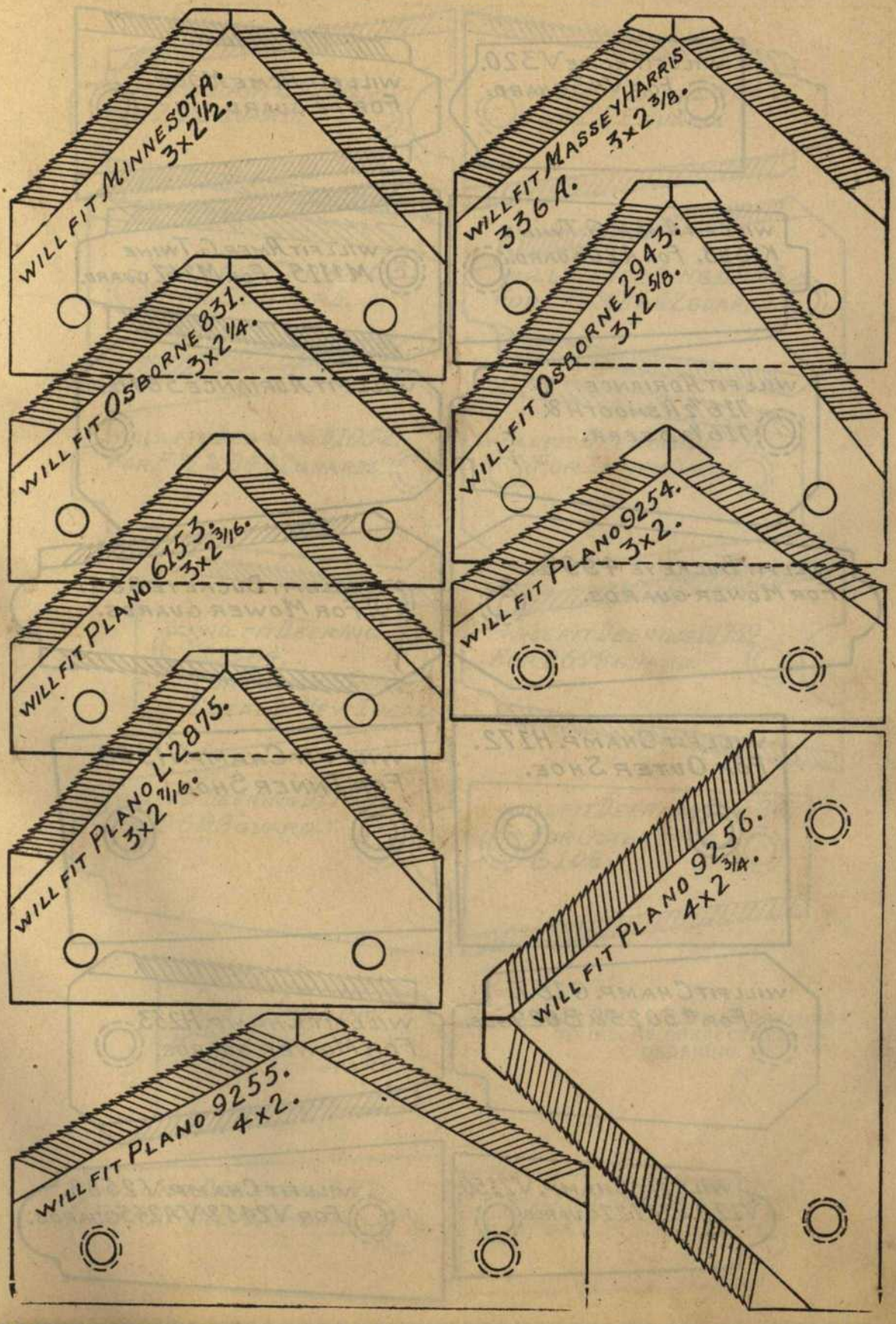




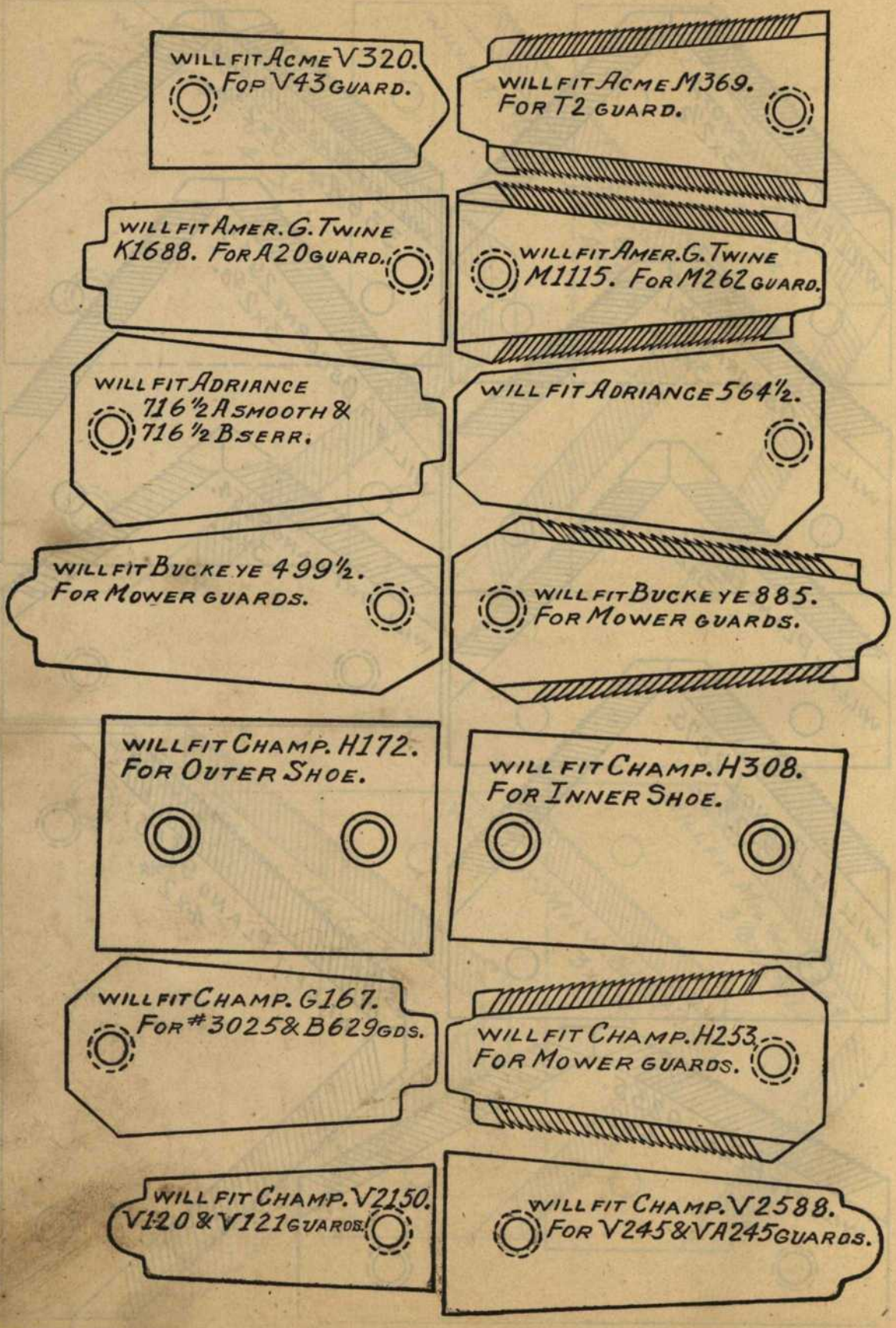
Outline Diagrams of Sections—Continued

For List of Patterns, see Pages 704-706.



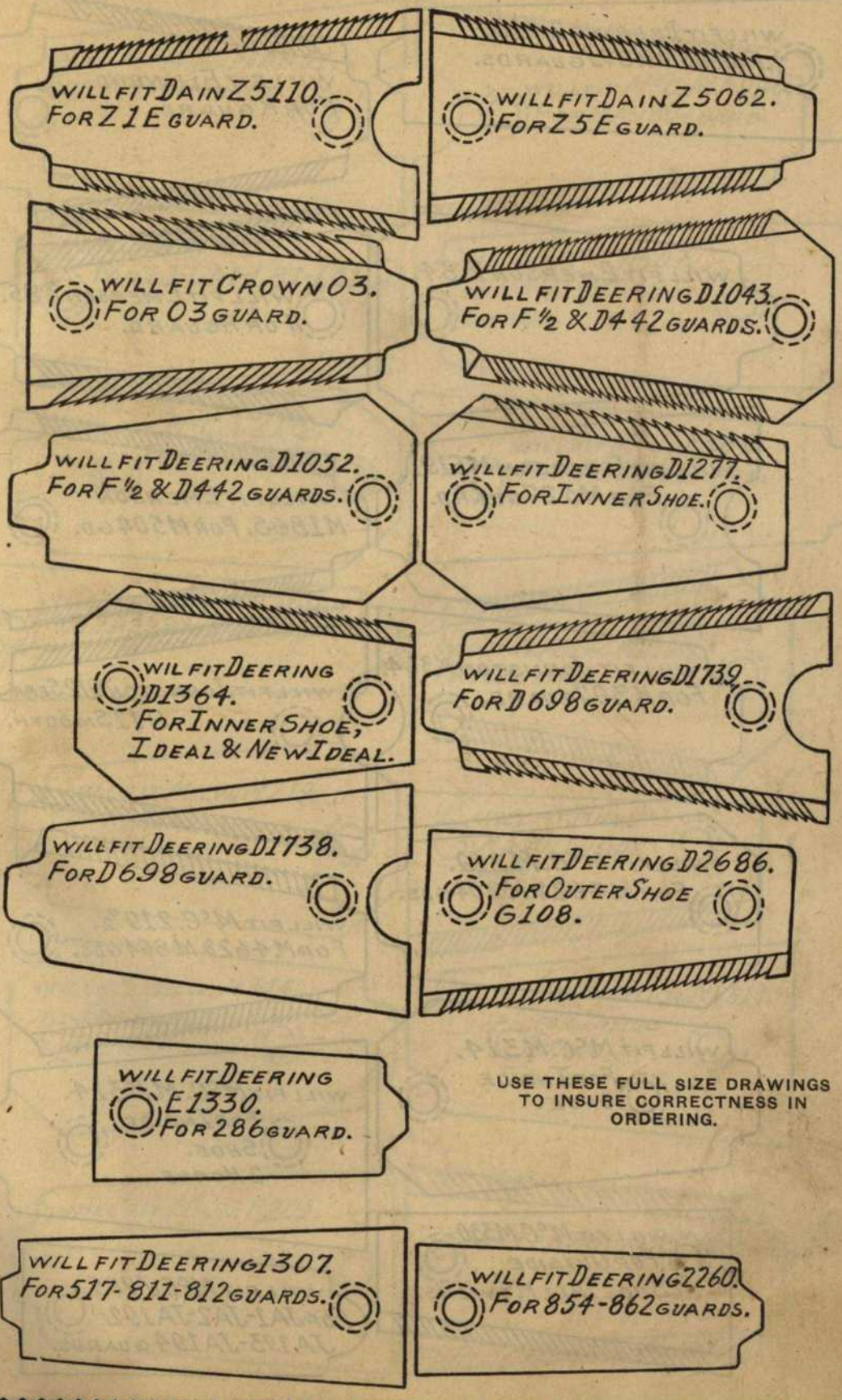
Outline Diagrams of Guard and Shoe Plates

For List of Patterns, see Page 707.



Outline Diagrams of Guard and Shoe Plates—Continued

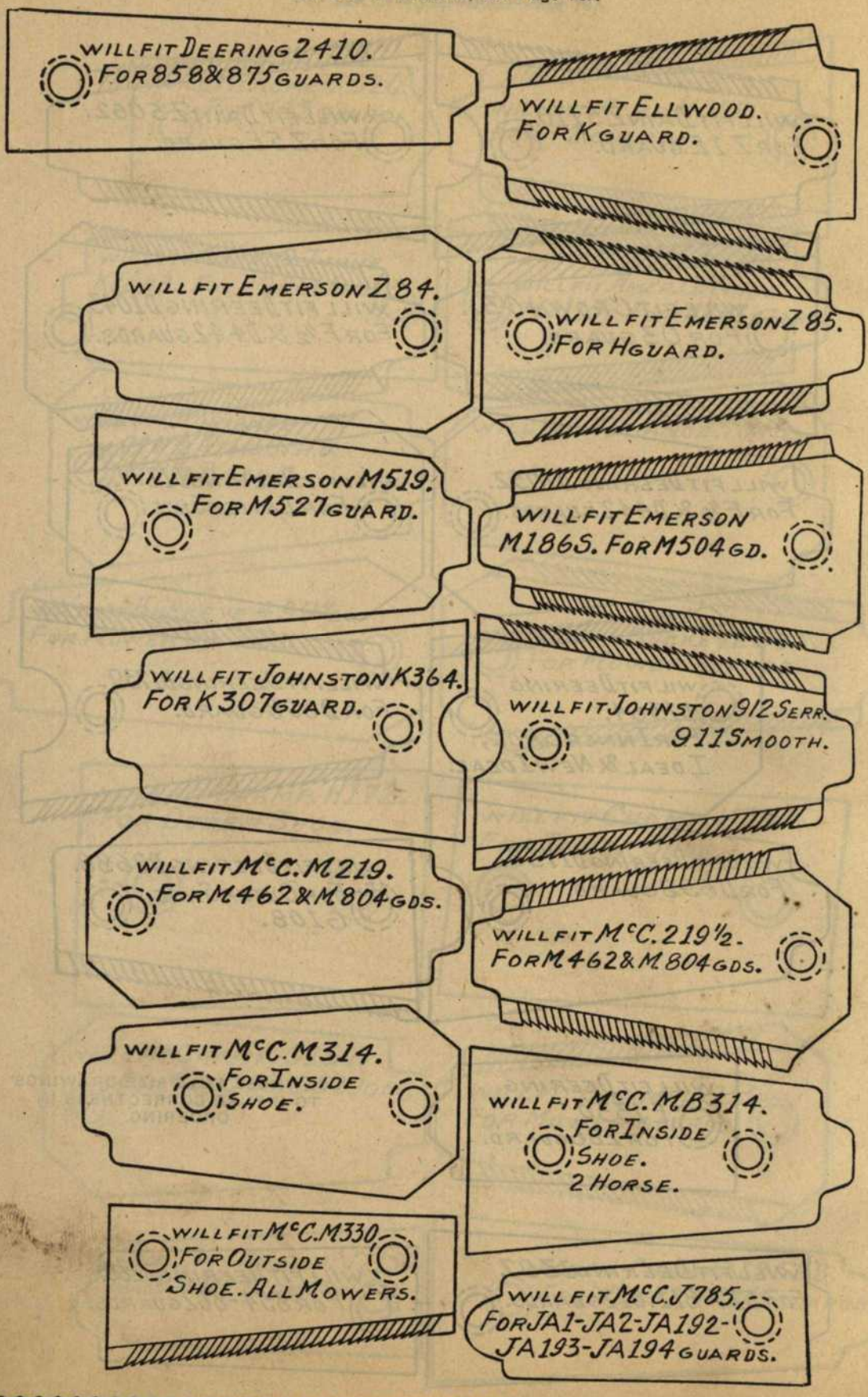
For List of Patterns, see Page 707.



USE THESE FULL SIZE DRAWINGS TO INSURE CORRECTNESS IN ORDERING.

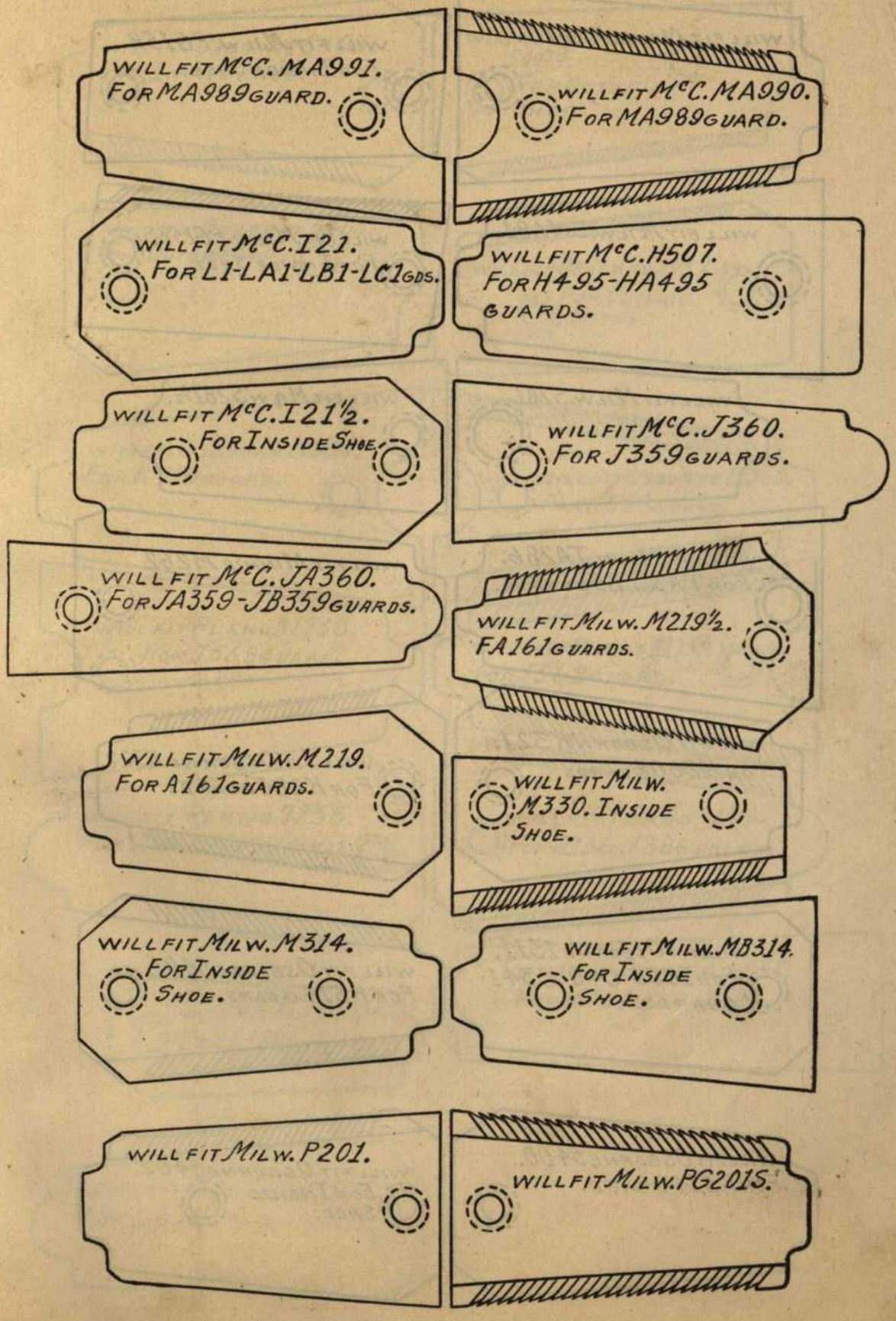
Outline Diagrams of Guard and Shoe Plates—Continued

For List of Patterns, see Page 707.



Outline Diagrams of Guard and Shoe Plates—Continued

For List of Patterns, see Page 707.



Outline Diagrams of Guard and Shoe Plates—Continued

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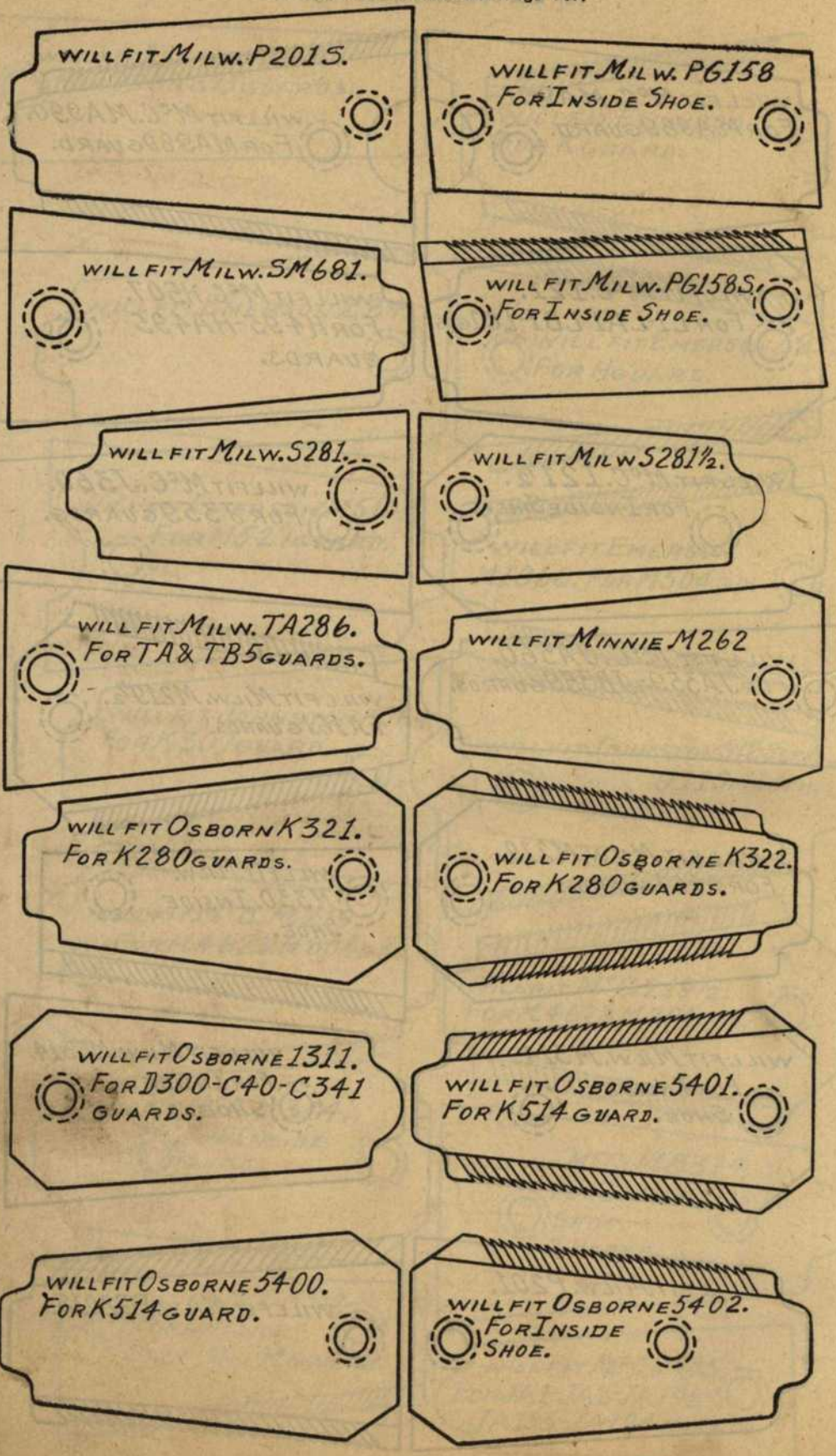

Outline Diagrams of Guard and Shoe Plates—Continued

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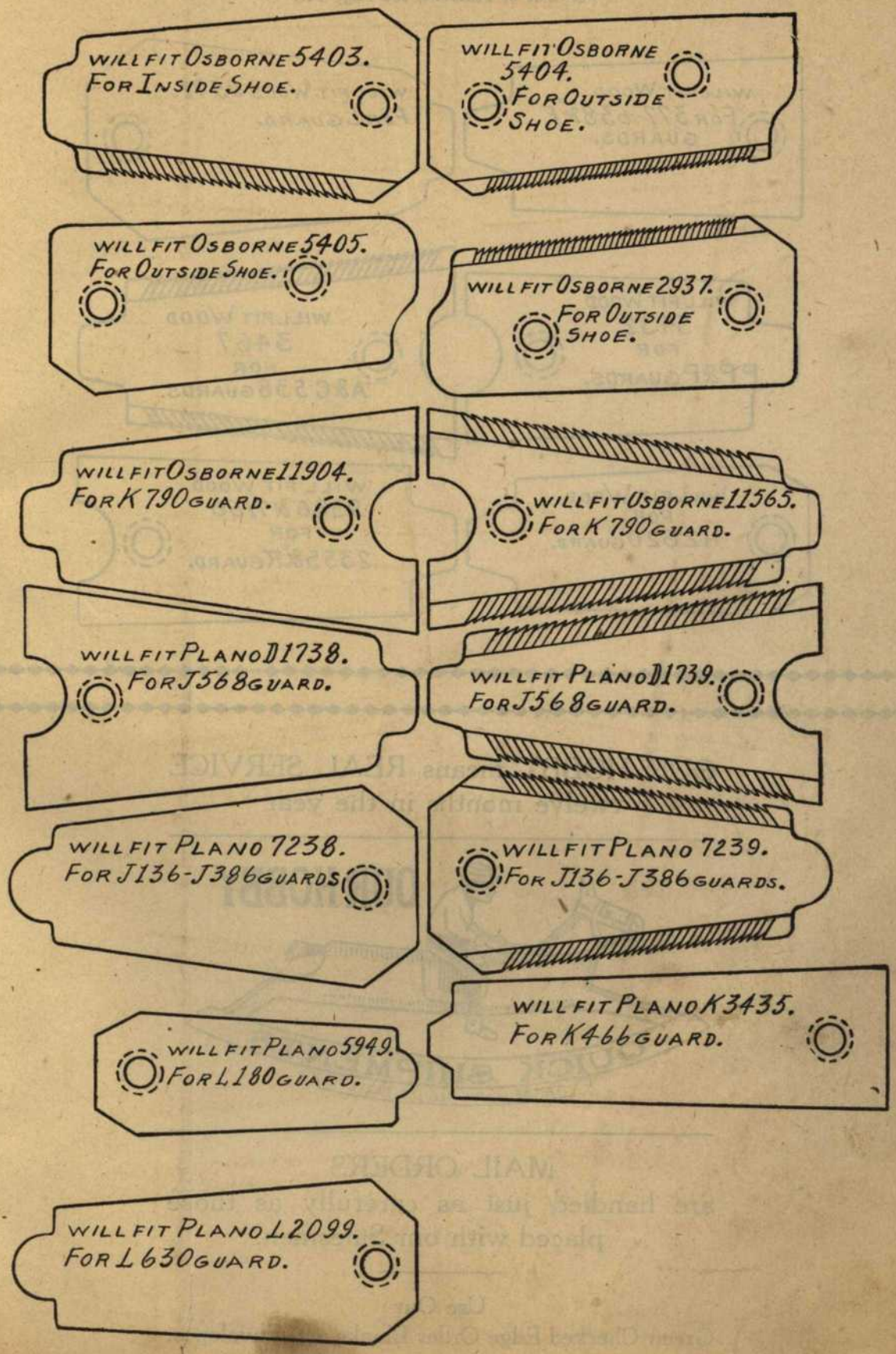

Outline Diagrams of Guard and Shoe Plates—Continued

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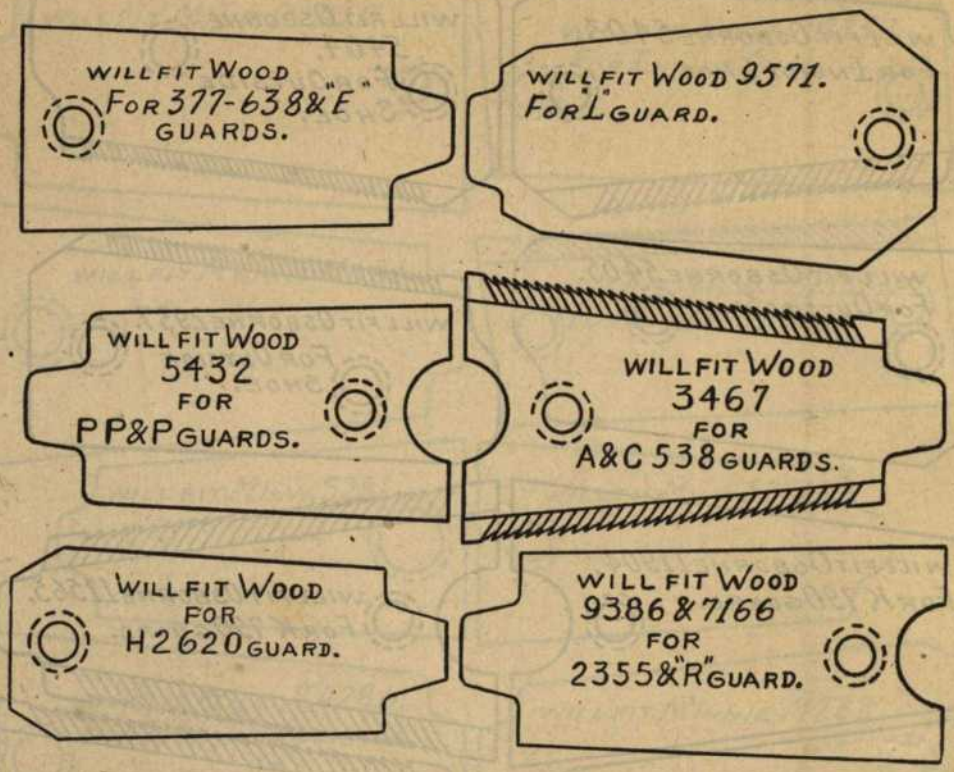

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